THE DRUG AND COSMETIC INDUSTRY

ESTABLISHED 1914

Formerly Called "DRUG MARKETS"

May, 1933

Editorials 405

Government Distrust—Packaging Committees—Pharmacopoeia Standards.

Feature Articles

Drug Manufacturers Face the Future 407
Medical Opinion 409
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VOL. XXXII **DRUG MARKETS, INC.** NUMBER 5

PUBLISHERS

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 W. 31st St., N.Y. City

Editor
THOMAS R. FARRELL

Business Manager
FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, FOREIGN COUNTRIES THREE DOLLARS, THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES; PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

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GIVAUDAN-DELAWANNA INC.

LE CHIMISTE
De la Galerie de S.A.S. Monseigneur le Duc d'Orleans

80, FIFTH AVENUE_NEW-YORK

Another Popular Novo is

NOVO-ROSE

Novo-Rose can be used successfully and economically in any cosmetic preparation, from bath salts to brilliantine. It is excellent for creams, imparting to them the fragrant scent of fresh-cut roses. Novo-Rose is unquestionably one of the finest low-priced perfume oils on the market today.

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J. T. Baker Chemical Co.
Benzol Products Co.
California Fruit Growers Exchange
Dow Chemical Co.
Heyden Chemical Corp.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
N. Y. Quinine & Chemical Works
Chas. Pfizer & Co., Inc.
Schuylkill Chemical Co.
Sherka Chemical Co.

Alcohol
A. K. Hamilton
Rossville Commercial Alcohol Corp.
U. S. Industrial Alcohol Co.

Alkaloids
Abbott Laboratories
J. T. Baker Chemical Co.
Mallinckrodt Chemical Works
Merck & Co., Inc.
N. Y. Quinine & Chemical Works

Bromides
J. T. Baker Chemical Co.
Mallinckrodt Chemical Works
Merck & Co., Inc.
N. Y. Quinine & Chemical Works

Citric Acid
H. J. Baker & Bro.
J. T. Baker Chemical Co.
California Fruit Growers Exchange
Dodge & Olcott Co., Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
N. Y. Quinine & Chemical Works
Chas. Pfizer & Co., Inc.

Glandular Products
Wilson Laboratories

Hydrogen Peroxide
Schuylkill Chemical Co.

Magnesia
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Salicylates
J. T. Baker Chemical Co.
Dow Chemical Co.
Heyden Chemical Corp.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
N. Y. Quinine & Chemical Works

Aromatic Chemicals
W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Co., Inc.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co., Inc.
Benj. French, Inc.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Compagnie Parento, Inc.
Sherka Chemical Co.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.

Essential Oils
W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Co., Inc.
P. R. Dreyer, Inc.
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard, Inc.
Compagnie Parento, Inc.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.

Flavors
W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Co., Inc.
P. R. Dreyer, Inc.
Fritzsche Brothers, Inc.
A. K. Hamilton
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Works
Compagnie Parento, Inc.
Ungerer & Co.
van Ameringen-Haebler, Inc.

Cocoa Butter
R. F. Revson Co.

Cod Liver Oil
W. Benkert & Co., Inc.
P. R. Dreyer, Inc.

Mineral Oil
M. W. Parsons, Imports
S. Schwabacher & Co., Inc.
Stanco Distributors, Inc.

Quinine
Mallinckrodt Chemical Works
Merck & Co., Inc.
N. Y. Quinine & Chemical Works

Cosmetic Materials
M. W. Parsons, Imports
John Powell & Co., Inc.
R. F. Revson Co.

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Sterling Manufacturing Co.

Botanical Drugs
W. Benkert & Co., Inc.
J. L. Hopkins & Co.
Peek & Velsor, Inc.
S. B. Penick & Co.

Absorption Bases
Th. Goldschmidt Corp.
M. W. Parsons, Imports

Beeswax
Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co.

Chalk
Industrial Chemical Sales Co. Inc.
John & E. Sturge, Ltd.
Universal Gypsum & Lime Co.

Colors
Interstate Color Co., Inc.
R. F. Revson Co.

Gums
Thurston & Braidich

Lanolin
American Lanolin Corp.
Bopf-Whittam Corp.

Stearates
Franks Chemical Products Co.
Mallinckrodt Chemical Works
M. W. Parsons, Imports

Titanium Dioxide
Titanium Pigment Co.

Zinc Oxide
New Jersey Zinc Co.

Containers & Machinery

Bottles
Carr-Lowrey Glass Co.
Hart Glass Mfg. Co.
Maryland Glass Corp.
Owens-Illinois Glass Co.

Boxes
C. F. Hatch Co.

Collapsible Tubes
National Collapsible Tube Co.

Glassine Paper
Riegel Paper Corp.

Packing Material
Kimberly-Clark Corp.

Vials
Kimble Glass Co.

Corks
Armstrong Cork & Insulation Co.

Metal Caps
Aluminum Seal Co.
Anchor Cap & Closure Corp.
Armstrong Cork & Insulation Co.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
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Molded Caps & Containers
Anchor Cap & Closure Corp.
Armstrong Cork & Insulation Co.
Beetleware Corp.

Liners
Armstrong Cork & Insulation Co.

Capping Machinery
U. S. Bottlers Machinery Co.

Filling Machinery
Arthur Colton Co.
Karl Kiefer Machine Co.
Geo. G. Rodgers Co.
Chas. Ross & Son Co.
F. J. Stokes Machine Co.
Stokes & Smith Co.
U. S. Bottlers Machinery Co.

Mixing Equipment
Arthur Colton Co.
Geo. G. Rodgers Co.
Chas. Ross & Son Co.
F. J. Stokes Machine Co.

Now it's all Clarified!

New Exchange Brand Oil of Lemon makes a clear-yellow, cloudless solution in alcohol

MADE WITH EXCHANGE
COLD PRESSED OIL OF LEMON
MADE WITH ANOTHER BRAND
BOUGHT ON THE OPEN MARKET
Unfiltered Alcoholic Solutions of LEMON OIL

EVERY lot of Exchange Brand Oil of Lemon you buy today embodies the most important improvement made in lemon oil during the twentieth century!

All the insoluble substances that cause muddiness are now removed by the exclusive Exchange process.

You simply add alcohol and get immediately an absolutely clear extract for use in your product. No settling. No filtration. No cloud. No sediment. No waste!

Finer Color, Flavor, Aroma

Due to the application of Exchange standards of production control to rich California lemons, Exchange Brand Oil of Lemon has been notable for its fine flavor, color and aroma. Now these qualities are further improved.

It is uniform in performance. Stable in your finished product.

Make Your Own Test

On the basis of results alone, compare Exchange Brand Oil of Lemon with any or all others. Then compare the price and figure your saving.

Order a supply now, and make this test. Start at once to get better results at lower cost.

QUICK FACTS

1. **Flavor** that suggests a freshly-cut lemon
2. Finer **Aroma**
3. Deep natural **Color**
4. **Stable** in your finished product
5. **Uniform Performance**
6. **Lower Cost** per unit of flavor

AND NOW...

7. **CLARIFIED.** No sediment. No cloud. No **filtration.** No waste.

Sold to the American market exclusively by

FRITZSCHE BROTHERS, Inc.
78-84 Beekman Street, New York City

DODGE & OLCOTT COMPANY
180 Varick Street, New York City

Distributors for

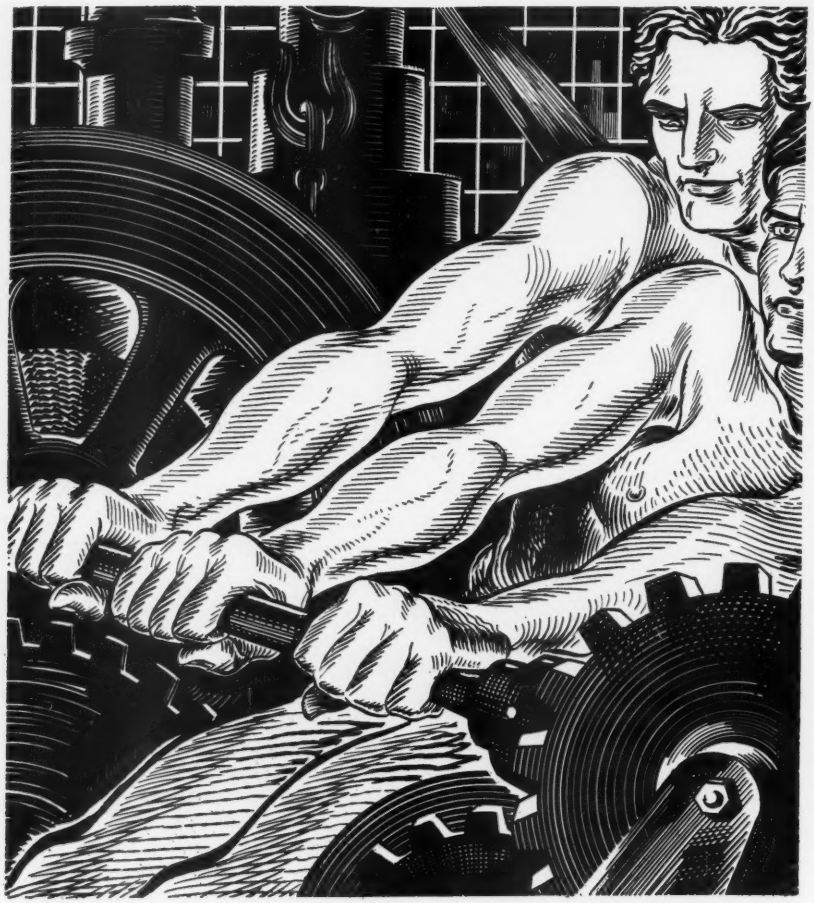
CALIFORNIA FRUIT GROWERS EXCHANGE
Products Department, Ontario, California

Producing Plant: EXCHANGE LEMON PRODUCTS CO., Corona, Calif.

Exchange BRAND

OIL OF LEMON

Copr., 1933, Products Department, California Fruit Growers Exchange



CO-OPERATION

We have that peculiar faculty of pulling together that seems to please our customers. When buying your industrial alcohol and chemicals, try us out. Good team work is one of our finest attributes.

MANUFACTURERS OF
INDUSTRIAL ALCOHOL, (Pure and Denatured, all formulae)
And the following list of Industrial Chemicals

Acetates (Amyl, butyl and ethyl) . . . **Antidolorin (Ethyl Chloride** U. S. P. of guaranteed purity for anesthesia) . . . **Butyrates** (Amyl, butyl and ethyl) . . . **Cotton Solutions** . . . **Ethyl Chloride** (For refrigeration and ethylation) . . . **Formates** . . . **Artificial Fruit Ethers** (For flavoring purposes) . . . **Gum Solutions** . . . **Isopropyl Alcohol** . . . **Isopropyl Acetate** . . . **Ketacetate** . . . **Leather Dopes** . . . **Special Esters**. . . **Concentrated Nitrous Ether** (For sweet spirits of nitre, U. S. P.) . . . **Plasticisers** (Dibutyl phthalate, etc.) . . . **Propionates** (Amyl, butyl and ethyl) . . . **Pure Iso Amyl Alcohol** . . . **Refined Fusel Oil** . . . **Secondary Alcohols and Esters.**

QUAKER BRAND Alcohol

FRANCO-AMERICAN STANDARDIZED CHEMICALS

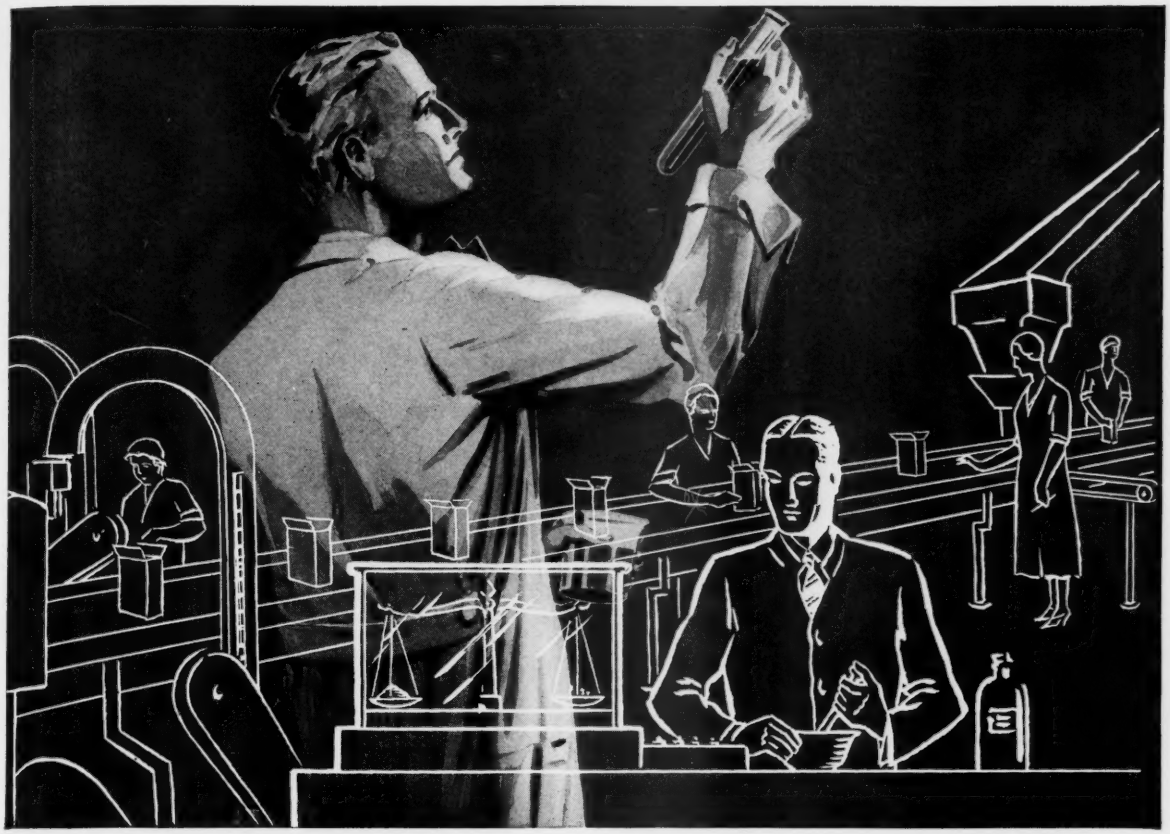
Pennsylvania Sugar Company
Franco-American Chemical Works

SALES OFFICE

95 WALL STREET — **A. K. Hamilton** — **NEW YORK, N. Y.**

Sales representatives and warehouse stocks in principal cities

Distillery — Philadelphia, Pa. — **Chemical Plant — Carlstadt, N. J.**



Baker's Rochelle Salt Is Chemically Balanced

Baker's Rochelle Salt is made from a selected grade of Argols. In the manufacture of Seidlitz Powders as in many other pharmaceutical preparations—neutrality or the chemical balance of each component part of Rochelle Salt is essential. BAKER'S Rochelle Salt, U. S. P., large crystals, fine crystals, or powder makes a solution, with chemical balance between the Alkali metals, Potassium and Sodium and Tartaric Acid.

It is free from insoluble matter and heavy metals to an unusual degree. Test Baker's Rochelle Salt. You will appreciate its physical uniformity and chemical balance. Quotations gladly made upon request.

J. T. BAKER CHEMICAL CO.

Phillipsburg, New Jersey

New York	Philadelphia	Chicago
420 Lexington Ave.	220 S. 16th St.	624 S. Michigan Blvd.

MADE BY THE MANUFACTURERS OF

"Baker's Analyzed"

C. P. CHEMICALS AND ACIDS

Sample your way to bigger sales

SAMPLING by mail is an old, established practice that has today taken on new importance. To all parts of the world are rushed packaged products—large and small, old and new, known and unknown—to find new markets, new sales, new interest among millions of consumers, jobbers and dealers.

Foremost among the successful carriers of sampled and packaged products is the glass vial. Kimble Vials—retempered for maximum strength—are today first choice of the leading manufacturers of drugs, perfumes, pharmaceuticals, toiletries and other products which can be sampled and packaged in small containers.

Kimble Vials are automatic-machine-made. Their walls are uniform in diameter and thickness. They are light in weight, and minimize shipping costs. Strong, durable, leak-proof and sanitary, they carry their contents with complete safety. Their clean-cut design, colorful closures, and attractive appearance radiate purity and invite sales.

Consult with Kimble on your sampling and packaging requirements. Fully illustrated Kimble Vial Catalog—with prices and specifications—mailed promptly on request.

KIMBLE GLASS COMPANY

VINELAND, NEW JERSEY.

NEW YORK • PHILADELPHIA • BOSTON

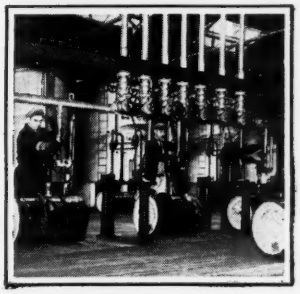
CHICAGO • DETROIT

• DIVISION OF U. S. INDUSTRIAL ALCOHOL CO. •

In these large distilling columns many chemical solvents are produced.

An assembly of 20 large storage tanks for important solvent chemicals.

Accurate measure is guaranteed by these automatic - electric filling machines.



ETHYL OXALATE

(*Di-ethyl Oxalate*)

$(COOC_2H_5)_2$

SPECIFICATIONS

Color and Properties:
Colorless liquid

Constants:
Ester—at least 97%
Sp. gr. 1.077 at 20°/20°C.
Wt. per gal. 8.96 lbs.
Acidity: Not over 0.1% as oxalic acid
Boiling point: 184°—185°C.

Solubility:
Miscible in all proportions with alcohol, ether, ethyl acetate, and other common organic solvents. Only very slightly soluble in water.

Derivation:
Esterification of oxalic acid

Method of Purification:
Distillation

Grades:
Technical 96-100% di-ethyl oxalate

Containers:
Steel or tin-lined drums
Glass bottles

Fire Hazard:
Combustible, but not inflammable, flash point above 80°F.

Railroad Shipping Regulations:
None

LEADING manufacturers in the pharmaceutical and dyestuff industries are the largest tonnage purchasers of this important chemical. Ethyl oxalate is also used extensively by research chemists as its structure lends itself readily to organic coupling.

The extreme purity and uniformity of ethyl oxalate are guaranteed by a rigidly enforced manufacturing standard supervised by a corps of 24 chemists. Today, the U. S. I. C. Company is the largest producer of ethyl oxalate.

Trial samples will be furnished on request while working quantities are supplied to manufacturers and laboratories at nominal cost. U. S. Industrial Chemical Co., Inc., 60 East 42nd Street, New York City, N. Y.

U.S. INDUSTRIAL CHEMICAL CO., INC.

WORLD'S OLDEST AND LARGEST MANUFACTURER OF ALCOHOL CHEMICALS

Ethyl Phthalate. Butyl Phthalate. Nitrocellulose Solutions

Amyl Acetate. Butyl Acetate. Ethyl Acetate. Ethyl Chloro Carbonate. Ether

• DIVISION OF U. S. INDUSTRIAL ALCOHOL CO. •

SELECT YOUR MOLDED CAPS FROM THIS COMPLETE LINE

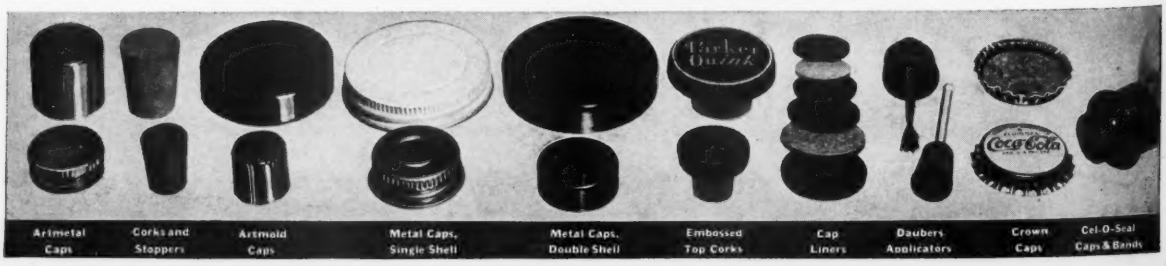
HERE are molded caps to harmonize with any container—lanky bottles, squatty bottles, squares, ovals, or rounds. This large line of graceful stock designs in Armstrong's Artmold Caps is offered in a full range of sizes and colors. You can easily find the cap your package needs.

Or, perhaps you want a molded-to-order cap—one that is yours alone. That, too, is easy. Armstrong's Package Styling Department will cheerfully consult with you and design an artistic private cap for your line.

You'll want to get the whole story on Armstrong's Artmold Caps and Jar Covers. Also, the facts about Armstrong's free laboratory service for determining the exact type of liner your product needs for proper sealing. This is all contained in a color-illustrated folder which is yours for the asking. Just write Armstrong Cork & Insulation Company, Closure Division, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's Artmold Caps

Consider, also, these other closures in the Complete Armstrong Line



Artmetal Caps | Corks and Stoppers | Artmold Caps | Metal Caps, Single Shell | Metal Caps, Double Shell | Embossed Top Corks | Cap Liners | Daubers Applicators | Crown Caps | Cel-O-Seal Caps & Bands

She is "home doctor" and nurse to ten million families.

Her medicine cabinet must contain more supplies than the city dweller needs.

The trademarked beauty aids on her dresser top reflect the fact that she is her own cosmetician!

The farm woman represents one-third of the American market for drugs and cosmetics.

One magazine, and one magazine only, is published exclusively for her.

THE
FARMER'S WIFE
Webb Publishing Company
NEW YORK SAINT PAUL CHICAGO

The makers of these products are cultivating this great market, through The Farmer's Wife:

MENTHOLATUM
ZONITE
CUTICURA
CASTORIA
FROSTILLA
SCOTT'S EMULSION
VASELINE
VAPO CRESOLENE

TIMELY FOR MAY

Acetphenetidin
Acid Acetylsalicylic
Bismuth Subcarbonate
Bismuth Subnitrate
Hexamethylenamine
Ichthymall
Quinine Sulphate
Sodium Salicylate

•

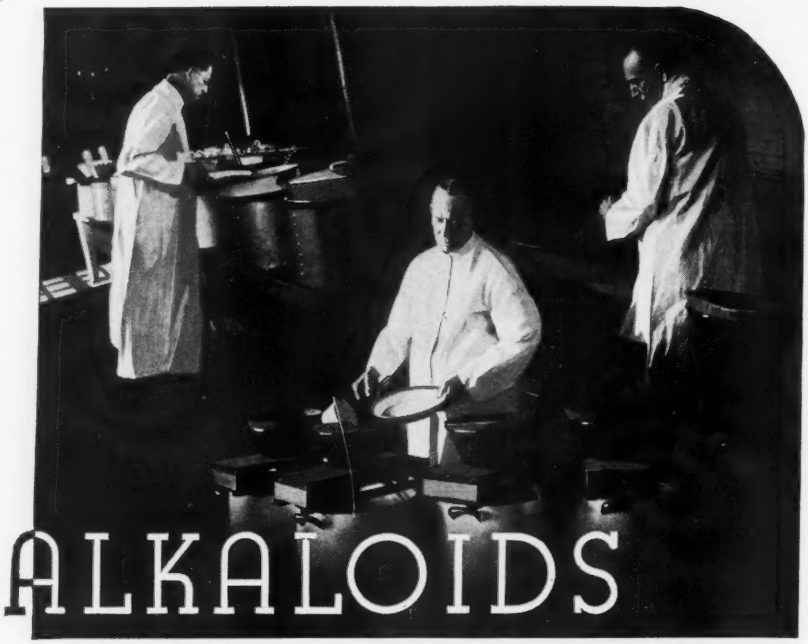
ALSO THE COMPLETE LINE OF MALLINCKRODT REAGENTS.

Maximum limits of impurities printed on label. A.C.S. items indicated on label.

•

CENTURY OF PROGRESS OPENS JUNE.

Don't miss the striking Mallinckrodt exhibit of step by step processes and uses of chemicals in medicine, surgery, pharmacy, photography and industry.



ALKALOIDS

It has ever been the policy of Mallinckrodt to maintain an extensive line of fine chemicals, even of those which like many of the alkaloids, their salts and other medicinal principles of vegetable origin, are used in small quantities, and therefore necessitate accuracy of packaging in very small units with special treatment to prevent deterioration.

Thus we can at all times supply:

Agaricin
Arecoline Hydrobromide
Atropine Alkaloid U.S.P.
Atropine Sulphate U.S.P.
Berberine Hydrochloride
Berberine Sulphate Acid
Berberine Sulphate Neutral
Brucine Sulphate
Cocaine Alkaloid U.S.P.
Cocaine Hydrochloride U.S.P.
Codeine Alkaloid U.S.P.
Codeine Hydrochloride
Codeine Phosphate U.S.P.
Codeine Sulphate U.S.P.
Colchicine Alkaloid Amorphous U.S.P.
Digitalin
Elaterium
Emetine Hydrochloride U.S.P.
Eserine Salicylate U.S.P.
Homatropine Alkaloid Crystals
Homatropine Hydrobromide U.S.P.
Homatropine Hydrochloride
Hydrastine Hydrochloride N.F.
Hydrastine Alkaloid U.S.P. IX
Hydrastine Sulphate
Hyoscine Hydrobromide U.S.P.
Hyoscine Hydrochloride
Hyoscyamine Alkaloid
Hyoscyamine Hydrobromide U.S.P.
Hyoscyamine Sulphate
Hyoscyamine Hydrochloride
Lobeline Sulphate
Morphine Acetate
Morphine Alkaloid U.S.P. IX
Morphine Hydrobromide
Morphine Hydrochloride U.S.P.
Morphine Ethyl-Hydrochloride U.S.P.
Morphine Sulphate U.S.P.
Papaverine Hydrochloride
Pelletierine Tannate U.S.P.
Procaine Hydrochloride U.S.P.
Picrotoxin
Piolocarpine Hydrobromide
Pilocarpine Hydrochloride U.S.P. Cryst.
Pilocarpine Nitrate U.S.P. Cryst.
Piperine Powd.
Salicin U.S.P.
Sanguinarine Nitrate
Santonin U.S.P. Cryst.
Santonin U.S.P. Powd.
Sparteine Sulphate U.S.P. IX
Strychnine Alkaloid N.F. Cryst.
Strychnine Alkaloid N.F. Powd.
Strychnine Nitrate U.S.P. Cryst.
Strychnine Nitrate U.S.P. Powd.
Strychnine Sulphate U.S.P. Cryst.
Strychnine Sulphate U.S.P. Powd.
Theobromine Alkaloid
Theobromine Salicylate
Theobromine & Sodium Acetate
Yohimbine Hydrochloride

• Mallinckrodt •

CHEMICAL WORKS

Makers of Fine Medicinal Chemicals

ST. LOUIS · CHICAGO · PHILADELPHIA · TORONTO · MONTREAL · NEW YORK

Government Distrust

WHILE the Department of Agriculture refused to reveal to the conference of drug and cosmetic manufacturers what the department proposed to put into the new federal food and drugs act, it is clear enough now that the facts were known to the department. Since the conference the daily newspapers have been called in and many of the facts have been given to them. Therefore it is evident that there exists a spirit of distrust of the industry on the part of the Department of Agriculture.

THE idea of a government department asking an industry just what changes in the law the industry would propose to make regulation more effective is excellent in theory, but it does not always work out in practice. The drug and cosmetic industry is made of groups with varying purposes, and one group can not easily answer for the entire industry. Furthermore, until the industry knows just what methods of enforcement of the new act are to be employed, the industry can not be assured that the changes would work in the public interest.

THE Department of Agriculture has been ill-advised in the past and has attempted to inaugurate reforms only to drop the subjects quickly when the industry revealed the true facts. These facts clearly indicated that these reforms would not work in the interests of the public, but rather would work to the public's detriment. Two specific cases come to our mind: First the policy inaugurated by Dr. James J. Durrett which caused him with considerable justice to be labeled a "therapeutic nihilist." Walter G. Campbell backed this man in his policies until the matter threatened to be taken up by the public. Second, Mr. Campbell's stupid proposal to have the variation clause eliminated from the law and thus stifle all progress in medicine. The facts on this proposal have already convinced two state legislatures of the danger of such a change.

THE evident distrust of the industry by the department does not augur well for the public interest. Rather does it indicate that the public will be forced to go to the doctor and obtain prescriptions for simple remedies if the department has its way.

Packaging Committees

A greater appreciation of packaging problems by manufacturers in this industry is becoming evident on every hand. At least three prominent drug manufacturers have within the past few months organized packaging committees within their organizations. The membership of these committees consists of men well informed in all phases of packaging with particular stress being placed on the technical angle of packaging.

Thus the ballyhoo which in the past has accompanied most package changes is gone from this industry. And in its place has arisen a scientific evaluation of packaging which moves this industry to a far greater extent than mere attractiveness and beauty would move it. The problem of packaging goods so that they will be in perfect condition when the consumer uses them is a problem which calls for research on the part of every progressive manufacturer, and this research is now under way.

Within the coming months and years we expect to see changes in drug and cosmetic packages which represent fundamental changes. We anticipate the use of more beautiful materials for many products which, in the past, could not be packaged in a beautiful manner. When the leading manufacturers in this industry tackle a problem of this sort in the right spirit, the answers are bound to come. Shortly we will explain the working of these various committees, and, following that, we will exhibit the results.

● ● ●

Pharmacopoeia Standards

In the discussion at the Scientific meeting of the A. D. M. A., Dr. Rosin, of Merck, brought out a point which can be quite far reaching in its effect. Dr. Rosin stated that the U. S. Pharmacopoeia contains in its monographs many statements that are not part of the standard, but are merely bits of useful or incidental information regarding the product in question. Thus the statement that digitalis should be stored in air-tight containers and kept free from moisture might merely mean that the product should be kept free from moisture, and that the air-tight containers are an aid in keeping it so. In dry places, the air-tight containers would not be necessary.

We believe it essential that this type of information be properly appreciated by those enforcing drug standards. And probably the only way in which this could be done is to have this information so marked in the forthcoming revision of the pharmacopoeia. For with enforcement officials in Washington apparently unable to rely on their own judgment at times, we feel it essential that the standards be made as cut and dried for them as is possible.

● ● ●

New and Non-Official

Cosmetic Therapy

We thought that salesmen of cosmetic raw materials might be a little different from those selling bonds or subscriptions or brushes but we have recently found that they are all brothers under the skin.

A customer recently asked one of them a rather involved question about pH in face creams and when he had finished the query the salesman said reassuringly, "oh, that's all right, you just get your pH from us and you won't have to worry at all. We have the best pH on the market."

This was countered by the story of the man who called up and asked for a pound of hormones, he didn't care what kind, the cheapest would do.

● ● ●

Up from the Bottom

This department, like many others which should have known better, has, from time to time, prophesied that the turn had come. But now we are sure of it. The other day we saw something and we are frank to confess that we never expected to live to see the day.

It was a sale in Woolworth's with regular 5 and 10 cent items selling for 4 cents, 6 cents and 7 cents. Now for the upswing!

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Looks Like a Big Smith Year

The Smiths seem to be coming into their own in the drug and cosmetic industry what with A. Homer Smith being elected president of the American Drug Manufacturers Association and Cecil Smith being elected president of the Associated Manufacturers of Toilet Articles, to say nothing of O. W. Smith being elected vice-president of the first-mentioned group.

All we need now to make it a straight ticket and a Smith landslide is for Carroll Dunham Smith to be elected president of the American Pharmaceutical Manufacturers Association.

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Did You Know?

It was news to us that the largest electric sign in the world is a replica in lights of the Bayer cross. It measures 236 feet in diameter and can be seen at a distance of over six miles. The 2200 bulbs, used in the nine, 40-foot letters, are suspended on a copper-steel net to lower wind resistance.

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For Aromatics Salesmen

The Miami Valley Coated Paper Co. is now ready to furnish paper scented like lilacs, a pine forest, burning autumn leaves, roasting coffee, or any aroma desired, in any degree of "scent intensity."

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Depression Gets a Good Word

The A.M.A. Journal has finally made its contribution to the economic scene in the form of an article showing the relationship between prosperity, depression and mental illness. The conclusions which interested us were that:

A smaller percentage of cases of mental illness showing a direct causal relationship to financial loss occurred during a period of national economic depression than during a period of national economic prosperity; and that

The less frequent occurrence of mental illness associated with personal financial loss during the economic depression may be explained by the fact that the actual situation of economic stringency serves to satisfy the unconscious sense of guilt which under normal economic conditions has less opportunity for propitiation.

● ● ●

Yes, It's Red

A short wheat crop may help to save the farmers, but a bumper corn crop is counted on for prosperity by Bluejay, Freezone, et al.

● ● ●

Ten Years Ago

From our pages, May 1923

Alfred Joensson, president, Alfred Joensson Co., states that one of the very oldest of all crude drugs is senna. Found in the tombs of the Egyptian kings it is still the most used laxative in the Pharmacopoeia.

Burroughs, Wellcome & Co., of London, manufacturing chemists, have erected an office building in New York for the use of the company's American interests.

Thomas W. Delahanty, of New York, has been appointed to the staff of the Chemical Division of the Department of Commerce.

Drug Manufacturers Face Future

A. Homer Smith
(Sharp & Dohme)
President

O. W. Smith
(Parke, Davis)
1st Vice-president

A. C. Boylston
(Mallinckrodt)
2nd Vice-president

BREAKING all records for attendance by thirty per cent., the twenty-second annual meeting of the American Drug Manufacturers' Association got under way on May 8, at the Homestead, Hot Springs, Va. Enthusiasm was high among the members, and the meetings brought forth much interesting discussion. The first day was given over to the Scientific Section of the Association, these meetings are abstracted in another part of this issue.

The general meeting of the Association opened on Tuesday. Greetings from other associations being brought by John G. Searle, president of the American Pharmaceutical Manufacturers' Association, Frank Blair, president of the Proprietary Association, and Dr. E. L. Newcomb, secretary of the National Wholesale Druggists' Association.

Nicholas H. Noyes, president of the association in his address spoke on the various bills to shorten working hours and thus spread employment, expressing the opinion that there must be some fairer and better way to spread work than through the adoption of such an arbitrary, unjust and radical plan as that embraced in the Connery bill. He said that the members of the Association strenuously objected to lodging with an individual the authority to unjustly take away from one firm and give to another; to unjustly penalize one firm to the advantage of another. Individual initiative and resourcefulness should not be choked, he said. He suggested starting with a milder measure limiting the working day to eight hours, and the week to forty hours, further limitations being imposed at later dates.

Mr. Noyes called attention to the campaign to stop the use of the word "drug" where "narcotic" is meant; to the efforts of the Association to have legislation passed to make counterfeiting of drug products a felony; the movement to write a new federal food and drugs act. With a reference to food and drugs act, Mr. Noyes spoke particularly against the proposal to remove the so-called variation clause which permits the marketing of products under U. S. P. and N. F. titles which differ from the standards, indicating that this would stifle progress in medicine.

Executive Vice-president and Secretary Carson P. Frailey, in his report spoke of the new policy of the Food and Drug Administration as follows:

"In recent months, however, there has been a marked tendency to "protect the public" by criminal prosecu-

John F. Anderson
(Squibb)
3rd Vice-president

S. DeWitt Clough
(Abbott)
Treasurer

Carson P. Frailey
Exec. Vice-president and Secretary

tion of the manufacturer in addition to seizure of his products. This seems to be wholly unwarranted unless there is clear-cut evidence that the manufacturer knowingly permitted his products to enter commercial channels in a sub-standard condition. On the other hand, if every reasonable precaution has been exercised the public would appear to be adequately protected by simple removal of the offending items from the channels of trade. Just why the Food and Drug Administration has seen fit to go beyond that objective in dealing with manufacturers whose integrity is unimpeachable and whose interest in the public health is founded upon the same high purpose as that of the enforcement agencies has not been officially disclosed.

It is felt that this practice may well be re-examined by the Administration to the end that the policy be modified where possible so long as the public interest is not sacrificed or jeopardized. A resurvey of U. S. P. and N. F. preparations was made by the Food and Drug Administration during the past twelve months. It is understood that more than 1,500 samples were collected from about 150 manufacturers. The adverse findings, of course, filter through to public attention by way of Notices of Judgment. It is unfortunate that some form of official commendation cannot also be accorded satisfactory findings."

The Anti-counterfeiting bill has been reintroduced by Senator Copeland in the present session of Congress, and can be identified as S-783, reported Horace W. Bigelow, General Counsel of the Association. Mr. Bigelow also reported at some length and detail on the proposed 30 hour legislation, and also upon the proposed amendment of the federal food and drugs act, directing his main criticism of the changes in the food and drugs act against the proposal to remove the variation clause from the act.

J. N. Staples, of E. R. Squibb & Sons, reported as Chairman of the Committee on Insurance, and there followed a discussion regarding the value of products liability insurance, some members favoring it and other being opposed to it. The principal argument against which bore a lot of weight, is the fact that insurance companies are anxious to settle cases with no regard to the effect that such settlements might have upon the reputation of the house or upon the relationship of the house with professional or trade connections. Executive Vice-president Frailey stated that his office has established a clearing of information regarding such claims, so that when the claimant or the attorney is the same, the fact can be known and the cases checked.

Dr. H. A. B. Dunning expressed the opinion that unemployment insurance was coming at some time and it is best for the industry to prepare for and to work to see that the legislation in the various states is prepared in a satisfactory manner.

Ralph R. Patch, Chairman of Committee on Patents and Trade-marks, stating that business has declined in the U. S. Patent Office so that now only three months elapses between the filing of an application and a reply, against a ten months period a year ago. He stated that one member claimed that blanket patents covering imaginary compounds stifle and hinder research.

Dr. Dunning stated that a chemical can be patented by merely stating the chemical can be made, no proof being necessary, or no separation from its by-products being necessary. Also it is possible to cover all compounds of the product. In foreign countries, he stated, it is necessary to prove the facts stated in the patent application.

The third general session was given over to the Sales and Advertising Committee, report of which appears on another page in this issue.

Resolutions passed by the association were two. The first made Franklin Black, of Charles Pfizer & Company, a permanent member of the Advisory Council. Mr. Black has been treasurer of the Association for a great many years, and had tendered his resignation from that office. The Advisory Council formerly consisted only of three past presidents. Mr. Black is an additional member.

The second resolution amended the constitution of the Association so as to prevent members from using the name of the association upon their letterheads or packages, and also to make possible the suspension of the membership of any member firm at any meeting of the Executive Committee of the Association.

Officers elected for the coming year are: President, A. Homer Smith, president of Sharp & Dohme; 1st Vice-president, O. W. Smith, president of Parke, Davis & Company; 2nd Vice-president, Dr. A. C. Boylston, general manager of Mallinckrodt Chemical Works; 3rd Vice-president, Dr. John F. Anderson, vice-president of E. R. Squibb & Sons; Treasurer, S. DeWitt Clough, president of Abbott Laboratories. N. H. Noyes, of Eli Lilly & Company, retiring president automatically became an additional member of the Executive Committee replacing S. Barksdale Penick who automatically became a member of the Advisory Council replacing Henry C. Lovis. Dr. L. N. Upjohn was elected a member of the Executive Committee replacing O. W. Smith.

Entertainment features consisted of the President's Reception, followed by dancing on Monday night; a masquerade on Tuesday night, and the Banquet on Wednesday night.

Winners of the golf tournament were: Qualifying Round Low Gross first Dr. B. T. Fairchild; second, John G. Searle; Tournament Low Net, Dr. F. Dunning; Low Gross, Dr. H. A. B. Dunning; First Flight Low Gross Aglar Cook; Low Net first, J. W. Kinsman, second E. D. Slater; Second Flight Low Gross Vincent Whalen; Low Net first Dr. J. P. Snyder, second J. W. McCoy; Third Flight, Low Gross Dr. F. O. Taylor; Low Net first Dr. John F. Anderson, second Hugh Craig; Fourth Flight Low Gross Mrs. A. D. Armstrong; Low Net First S. DeWitt Clough, second Dr. E. H. Volwiler; Blind Bogey first Dr. Paul Pittenger, second R. E. Dorland, third Dr. W. H. Rhodehamel.

Medical Opinion

Since the A. M. A. influences modern medical opinion to a large degree, it is well to read its views on many phases of therapy as expressed at the recent meeting of the Council on Pharmacy and Chemistry.

At the recent annual meeting of the Council on Pharmacy and Chemistry of the American Medical Association, the opinion of the Council was very clearly expressed upon many matters of therapeutics. These opinions are of real importance to manufacturers since they represent the trend of the opinion of this body which is so effective in formulating medical opinion.

The following are excerpts from the report of the meeting:

The amount of vitamin A necessary to prevent symptoms of deficiency in man is very small; the difficulty in experimental work where it is endeavored to obtain a state of A-avitaminosis is to obtain food sufficiently pure that no vitamin A accompanies it; it requires only a minimal amount of A to prevent or cure night blindness, the first symptom of A deficiency; in the matter of exploitation of certain vitamin A preparations and carotene preparations the dosage recommended appears to be excessive; in reference to vitamin D it is known that overdosage may occur. In the case of vitamin A, evidence is not available whether or not there is danger from overdosage; as these vitamins are so potent for good, it is not illogical to assume that they might be potent for harm. There had been cases of carotenemia from an excess of provitamin A (carotene). Use of carotene, which is relatively cheap in price and potent, may lead to decided disadvantages. The Council requested the Secretary to call to the attention of firms marketing carotene the fact that there may be disadvantages in large doses of carotene which have been recommended.

Council reaffirmed its opposition to use of term "anti-infective" in reference to vitamin A. Council has required that no advertising submitted to it for vitamin A preparations should be permitted to go beyond claim that vitamin A is an *aid* in building up resistance; that mention of specific diseases or implied reference to respiratory diseases by mention of lowered resistance due to wet weather, drafts, etc., is objectionable. Council's referee pointed out that controlled experiments in a large clinic had afforded no evidence to show that use of cod liver oil or other vitamin A preparations caused a lower incidence of respiratory diseases. It was brought out that certain experiments with children indicate that properly prepared and controlled irradiated milk is more effective so far as antirachitic action is concerned than cod liver oil or viosterol in equivalent amounts as judged by potency in "rat" units; that the evidence, however, was not sufficient for the Council to take action at this time.

Council offered no objection to a variable ratio in content of vitamins A and D in new commercial products such as halibut liver oil plus viosterol, and similar mixtures of vitamins A and D.

Concentrates of various types of vitamin A and D preparations coming on the market no longer contain vitamins from one source. One product before the Council contains concentrates of cod liver oil and halibut liver oil, to which has been added viosterol. Naming of such products in an acceptable manner required consideration. Council voted that in case of tablets and similar preparations of concentrates containing vitamins A and D, firms be permitted to label these products as follows: Vitamins A and D Concentrates; with understanding that label should also contain statement of source of vitamins and units of A and D from each source.

There is still not available any method of testing accurately potency of liver extracts. Council has required that liver extracts be labeled as equivalent in antianemic potency to so much fresh liver. Objection that could be raised is that livers vary in their potency, such as fat livers and lean livers, and that perhaps horse liver, cow's liver, pig's liver and all other kinds of liver used may vary in potency. Clinical responses also vary according to patients.

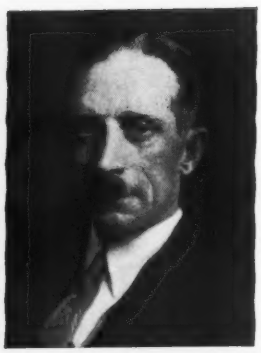
Council decided that policy be continued of requiring firms to label liver extracts with statement to effect that given amount of product is equivalent in antianemic potency to that of certain amount of fresh liver; and that all extracts at time of submission be accompanied by protocols showing comparative antianemic efficiency.

Council maintains opinion that there is not sufficient evidence to warrant Council's taking position that administration of liver extract, either by mouth or parenterally, enhances the response to iron therapy. Council decided that matter of rationality of combinations of iron salts and liver extracts be held in abeyance until further evidence of comparative value of simultaneous administration is forthcoming.

It was reported that a search of the literature fails to reveal that, in man, the addition of copper to iron is of any therapeutic advantage. Council decided that in view of lack of specific evidence of value, in man, of

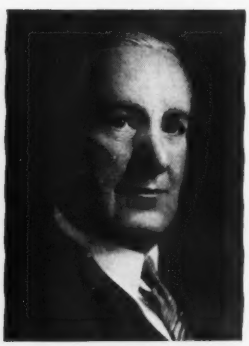
(*Continued on page 442*)

Cosmetic Trade Practices



Cecil Smith
(*Yardley*)
President

W. L. Schultz
(*Lightfoot, Schultz*)
1st Vice-president



Daniel J. Mulster
(*Ferd Muhlens*)
Treasurer

THE Associated Manufacturers of Toilet Articles adopted a formal resolution at its annual meeting in the Waldorf-Astoria New York, April 25, 26 and 27, asking the Federal Trade Commission to call a trade practice conference with a view towards formulating a code designed to eliminate objectionable practices in the cosmetic industry.

As a basis for this conference, the trade practices committee of the association presented the following six practices deemed unfair and the convention went on record as adopting these practices as unfair as well as the committee's suggestion of a joint conference with the Federal Trade Commission.

1. It is an unfair trade practice for the manufacturer when advertising his products orally, by printed advertisements, circulars, or radio broadcasts to point out or infer that his competitor's products contain ingredients which are dangerous for personal use or cause certain effects when used not borne out by facts, or to make any other statements as to the merits of his own or the demerits of his competitor's products which are misleading or intended to mislead the consumer.

Example One—"Our face powder contains no white lead or arsenic." This statement may be literally true but the inference is that other powders do contain white lead or arsenic.

Example Two—Unwarranted claims made for depilatories that they will permanently remove hair when in fact no product has yet been discovered that will effect permanent removal of the hair except mechanical means. Also untrue claims as to the harmless character of preparations which contain in greater or less quantity dangerous chemicals, such as ammoniated mercury or thallium acetate.

2. Advertising or representations printed, oral or by radio broadcast as to the nature, properties, origin, qualities or effect of the manufacturers or competitors merchandise which are false or intended to mislead, shall be considered to constitute unfair trade practice.

Example One—False or extravagant claims in advertising, advertising literature or radio broadcasts as to the beneficial, immediate and permanent results to be obtained when such claims cannot be substantiated.

Example Two—Statements by demonstrator representing manufacturers directly slandering competitor's products, or inferring the presence of harmful or dangerous ingredients in competitor's products.

Example Three—Demonstrators of manufacturers switching sales from competitor's products by inference or untruthful statements about the manufacturers or competitor's merchandise.

3. It is an unfair trade practice for the manufacturer or retailer to advertise or to make claims for a product

R. R. Brown
(*Amer. Com. Alcohol*)
Executive Committee

W. T. Haebler
(*Van Ameringen-Haebler*)
Executive Committee

Charles S. Welch
Secretary

on the basis of alleged new scientific discovery, when the manufacturer has actually no proper medical or scientific data based upon research for such claims; or where the retailer has made no attempt either to verify the claims of the manufacturer by investigation or test, or satisfy himself as to the authorities or reliability of the manufacturer for making such claims.

Example: Extravagant claims have been made about *turtle oils, hormones and vitamins* in toilet preparations which are not justified by any scientific authority or *research.*

4. It is an unfair trade practice for a manufacturer to pay *for the services of special sales persons in a store to* promote the sales of his products, and have it appear *that such sales persons are employees of the store, where* such payment is concealed either by granting extra discounts, *free goods, advertising allowances, special allow*ance for counter, window display space or in any other manner.

5. It is an unfair trade practice to make any payment or promise of payment by way of money or special allowances, secret discounts, free goods, rebates, or advertising or other allowances where such payments are to be used for distribution to sales persons, for the purpose of promoting the sale of the products of the manufacturer making such payment.

Example: P. M.'s or commissions to store owners, to buyers, their assistants, or any employee handling the manufacturer's products for resale.

6. *It is an unfair trade practice for the manufacturer* or his agents directly or indirectly to engage or pay for *the services of a demonstrator in a retail store,* or to contract with the store owner or his representative to *engage or appoint a demonstrator for the manufacturer* or his agent unless the retailer shall in some way conspicuously *identify said demonstrator in order to acquaint* the public of the fact that said demonstrator is in the *employment of and/or is representing the manufacturer* or his agent.

The association elected the following officers to serve for the next year: president, Cecil Smith, president, Yardley & Co., New York; first vice-president, W. L. Schultz, of Lightfoot, Schultz & Co., Hoboken, N. J.; second vice-president, F. Moss, Daggett & Ramsdell, New York; treasurer, Daniel J. Mulster, Ferd. Muhlens, Inc., secretary, Charles S. Welch.

Three new members of the executive board were chosen. E. B. Hurlburt, J. B. Williams Co., retiring vice-president, was elected to fill the vacancy caused by the election of W. L. Schultz as vice-president, and R. R. Brown, American Commercial Alcohol Co., and W. T. Haebler, Van Ameringen-Haebler, Inc., were elected to represent the associate membership on the board, succeeding S. H. Clark of Whittaker, Clark & Daniels, Inc., and Louis Spencer Levy, Perfumer Publishing Co.

H. Henry Bertram, former president of the associa*tion and now with Frederick Loeser & Co., Brooklyn,* was presented with the Richard A. Hudnut medal at the annual banquet.

The convention was generally acclaimed one of the most successful in years from every viewpoint. The entertainment committee, particularly, received many *commendations for its excellent handling of the social* and entertainment features of the convention. The members of that committee were: F. J. Lynch, Chair*man (Deceased); L. R. Root, 1st Vice Chairman;* E. W. King, 2nd Vice Chairman; W. C. Young, Treasurer; C. E. Kelly, Asst. Treasurer; A. C. Burgund, Charles Fischbeck, B. J. Gogarty, Edmund Hoffman, P. W. Hyatt, W. E. Klaas, E. M. Kaylor, W. P. Murray, H. C. Seaman, Karl Voss.

The business sessions, too, were particularly well attended. Of paramount importance, of course, in *view of the important step being taken by the associa*tion, was the talk given by Commissioner William E. Humphrey, head of the Federal Trade Commission. He addressed the meeting on Wednesday afternoon on the subject, "How a Trade Practice Conference Functions." Other speakers at that session were J. A. Kennedy, president of the Canadian Cosmetic Association, and Abel I. Smith, counsel of the association.

The speaker at the Tuesday session was William Resor of the J. Walter Thompson Co., who spoke on "False Advertising Claims, Substitution and Slander." The last session on Thursday, April 27, was addressed by Dr. James M. Doran, Commissioner of Industrial Alcohol and Lincoln Filene of Wm. Filene's Sons Co., Boston. The latter also devoted a large portion of his talk to trade practices, claiming that if business did not put its house in order, the Government would.

Banquet of Associated Manufacturers of Toilet Articles

Improving Drug Standards

F. F. Berg, of E. R. Squibb & Sons, reported as Chairman of the Committee on Chemical Tests and Standards in part as follows:

Scientific sections of the A.D.M.A. reveal changes necessary for improvement in the quality of drugs.

Bromides Assay

U. S. P. X assay for Bromides, page 432, makes no provision for removal of chlorides when present and the prescribed sulphocyanate titration does not give true results. It is suggested that in conducting this assay the mixture of silver bromide and chloride be removed before titration for excess silver. Two methods suggest themselves for doing this—either by filtration and washing or the more favored method of making the solution up to a definite volume in a standard flask and allowing the precipitate to settle, removing by pipette an aliquot portion of the clear solution for back titration.

Caffeine Assay

The assay for Caffeine as described on page 85, U. S. P. X, prescribes that 10 cc. of sodium hydroxide test solution be used for liberation of caffeine.

Some have experienced considerable difficulty in the assay and by check assays made upon caffeine citrate of known composition equally discordant results are often obtained. Others report no difficulty. There is apparently some deciding factor in the technique which controls the degree of accuracy. There appears good reason for establishing a controlled degree of alkalinity for liberation of the caffeine which appears to give more constant and reliable results. The following method including the above feature is recommended.

> Dry about 1 Gm. of Caffeine Citrate to constant weight at 80° C. Record the weight. Transfer to a separatory funnel (about 100 cc. capacity. Add 10 cc. of water, 1 drop of phenolphthalein T. S. and just enough sodium hydroxide T. S. to give a permanent pink color. Extract with 20 cc. of chloroform, shaking vigorously for 5 minutes. Pass the chloroform extract (lower layer) through a small filter paper into an accurately weighed beaker. (Avoid allowing water solution to pass through the stopcock). Wash the tips of separator and funnel with a few cc. of chloroform. Make two more extractions as above, combining the three chloroform extracts. Finally wash the paper well with the chloroform. Cover the beaker with a watch glass and evaporate to dryness on the steam bath. Dry at 80° an hour and weigh.

The above assay is equally satisfactory for caffeine and sodium benzoate.

Ammoniated Mercury

Attention has been drawn to present official monograph for Ammoniated Mercury. Under description and physical properties appears the statement that it is readily soluble in a cold solution of ammonium carbonate. A number of operators have verified the criticism raised that ammoniated mercury is not readily soluble in ammonium carbonate solution. So far as can be ascertained, this qualification does not contribute anything of value as a test. It is suggested that that portion of the sentence which deals with this solubility be omitted from future specifications.

Determining Calcium

The present pharmacopoeial method for determination of calcium in these two magnesium salts depends upon the conversion of any calcium present into oxalate, which involves a period of standing of several hours or over night, subsequent collection of precipitate and finally an ignition and determination as calcium oxide. This procedure is unduly long and tedious and several operators have drawn attention to the method now official in the British Pharmacopoeia, which depends upon the determination of calcium as sulphate. It is pointed out that the method is more reliable, much shorter, and less liable to error of manipulation. A method quite similar to the B. P. method has been recommended by a Committee of the American Chemical Society. Journal Ind. & Eng. Chemistry, Anal. Ed., Vol. 3, page 221, (April 15, 1931).

Some operators find the A. C. S. method more satisfactory by reason of dissolving the magnesium salt in hydrochloric acid first and afterward adding sulphuric acid and alcohol. Several workers' experience with the B. P. method as well as the A. C. S. method points quite conclusively to deserving consideration of either of these methods as an improvement over the present official method.

Ether

The acidity determination as given in the U. S. P. monograph has been criticized because of difficulty in obtaining accurate results, it being pointed out that phenolphthalein indicator is sensitive to carbon dioxide and the alcoholic solution of phenolphthalein in the presence of ether obscures the end point. The acidity requirement of the U. S. P. specifies that not

more than 0.4 cc. of additional N/50 sodium hydroxide shall be required for neutralization of acidity.

A substitute method, using bromthymol blue as indicator, has given greater accuracy. It has been found that a good quality ether will not require more than 0.4 cc. of N/100 sodium hydroxide.

Those members of the Committee who have tried the present official method in comparison with proposed change which is embodied in detail in the paper published by L. P. Hall, Journal Industrial Engineering Chemistry, Analytical Edition, Volume 2, page 244, 1930 have recommended it for its ease of application and higher degree of accuracy.

Iron Glycerophosphate

In a recent bulletin of the National Formulary Revision Committee there appeared a proposed monograph for Iron Glycerophosphate which specified under color; "greenish yellow for powder and scales." It has been drawn to the Committee's attention that "the powder is light buff and the scales light reddish brown."

Under *aqueous solution*—Monograph reads: "A one in twenty solution becomes turbid on heating." Comment to the Committee: "On the contrary, no turbidity is evident on heating and it is suggested that this test be omitted or modified."

Assay—Monograph specifies: "Iron content between 15% and 16% corresponding to 78% to 89% Iron Glycerophosphate." The suggestion has been made that the assay be conducted on material dried at 110° C. and the iron content dried sample to correspond to 95% to 100% Iron Glycerophosphate.

Synthetic Chemicals

DR. E. H. VOLWILER'S report as Chairman of the Committee on Synthetic Organic Chemicals, gave the following conclusions:

"Of the cooperating laboratories, one expressed the opinion that a recommendation as to which salt of Ephedrine should be recommended for inclusion in the U. S. P. XI, should be left in the hands of the U. S. P. Revision Committee, which already has tentatively suggested the Sulphate. On the other hand, several laboratories advanced the following suggestions for adoption of the Hydrochloride as the official product:

"(a) The Hydrochloride can be prepared commercially in a higher state of purity than the Sulphate. The Hydrochloride possesses advantages over the Sulphate as to solubility and purity.

"(b) The 1933 edition of N.N.R. states that the specific rotation for the Hydrochloride shall be between -33.0° and -35.5°. This same standard of purity would require that the Sulphate have a specific rotation of from -31.1° to -33.4°. Yet, this same edition of N.N.R. permits a Sulphate of which the specific rotation ranges from -29° to -30°.

"(c) The Hydrochloride contains several per cent. more alkaloid than the Sulphate.

"(d) It is logical to adopt the salt which is obtainable in the highest state of purity, rather than depending entirely upon prescription surveys for a decision.

"For determining optical rotation of Ephedrine salts, it is recommended that not less than four grams in 100 cc. be used, so as to provide greater accuracy. Some laboratories prefer ten grams in 100 cc.

"For the color reaction, it is recommended that not less than 10 milligrams be used as the standard. For ash determination, not less than 0.5 gram.

"Since the U. S. P. generally employs 25° for determinations of optical rotation, it is suggested that this temperature be employed for Ephedrine. It was found that the differences of rotation between 20° and 25° are small. There are too wide discrepancies between optical rotation determinations in different laboratories; these differences are as much as 1.4° for the Hydrochloride, and 1.6° for the Sulphate, the same samples being used. Perhaps a cooperative investigation of details of determining optical rotation is indicated.

"The melting point determinations of identical samples of the Sulphate also showed considerable variations between different laboratories. This test does not seem to be an accurate or very significant one, for the temperature is actually one of decomposition, rather than a true melting point.

"The modified A. O. A. C. method for assay of phenolphthalein seems to give consistent, though slightly low results, in the hands of certain analysis, although others experience considerable difficulty with it. It is suggested that the further work be done with the method to determine the cause of these difficulties. The titanous chloride method is too cumbersome to be generally practical, and the results seem to offer no particular advantages over the iodine method.

"The standards for phenobarbital should permit a slight yellowish color in the test for readily carbonizable substances, as is done in the case of other similar items in the U. S. P. A pH test should be included, and in this case a sodium analysis is probably unnecessary. A test for solubility in alcohol could well be added, permitting only a slight cloudiness or opalescence. More logical results are obtained in the assay for phenobarbital and for sodium when the Sodium Phenobarbital is dried at 140°, although several laboratories are doubtful about decomposition at this temperature, and further work on this point should be done.

"The method for the melting point of acetylsalicylic acid suggested by Beal and Szalkowski has the advantage of using a higher initial temperature of the melting point bath, thereby avoiding some decomposition at lower temperatures. The method has given good results in this investigation. Attention should be called, however, to the fact that not all laboratories obtained melting points above 135°, as called for by the method. This discrepancy is no doubt due in part to the fact that "melting point" is defined differently in various laboratories. Some laboratories may consider that the substance melts when incipient fusion is reached; others at the stage when a meniscus forms; and still others, when a clear liquid is obtained. It

seems that the melting point by the proposed method should be given as that temperature at which a clear liquid results. If this is not done, certainly a single figure can not be given logically as the melting point of acetylsalicylic acid, as was done in some of the reports tabulated above."

Vitamin Assay

DR. A. H. HOLMES, of The E. L. Patch Company, reported as Chairman of the Committee on Vitamin Assay, in part as follows:

"During the past year the Vitamin Assay Committee has given the major portion of its time to various activities concerned with biologic Vitamin A and Vitamin D tests. However some attention has been given to a study of the colorimetric method for Vitamin A determination and to methods for the quantitative determination of Vitamin B. Samples of cod liver oil have been assayed by the antimony trichloride colorimetric method. The object of these tests has been to compare the results which were obtained by different laboratories on the same samples of oil and to compare the results obtained by the colorimetric method with those obtained by the standardized vitamin assay methods described in our 1932 Report.

"In accordance with the recommendation of the Executive Committee of the American Drug Manufacturers' Association your Committee has commenced a study of Vitamin B assay methods. As yet it has been possible to give this study relatively little attention but already sufficient data has been obtained to indicate the need for carefully specifying the nature of certain materials used in the preparation of experimental rations and carefully describing certain details of the laboratory procedure.

Contact Committee

DR. J. P. SNYDER, of Norwich Pharmacal Company, reported as chairman of the Contact Committee as follows:

"At our meeting in March one thing of particular importance to pharmaceutical manufacturers was the passing of a resolution requesting the United States Pharmacopoeia Committee prior to the adoption of physiological methods and particularly tolerances for such products as Ergot, Digitalis, Aconite, etc., to submit to the Combined Contact Committees these methods. It will be the object of the Contact Committees to distribute samples of these products, both old and new, to the various laboratories for a trial cooperative series of tests by experienced members of their scientific staffs. The Contact Committee feels strongly that no physiological assay method should be adopted until its value has been thoroughly demonstrated by comprehensive cooperative work.

"The National Formulary Committee has indicated a desire to include in the new edition a list of some fifty compressed and hypodermic tablets; this list to include only tablets for which the Combined Contact Committees have provided methods of assay and established tolerances.

"A request has been placed by us with the National Formulary Committee that they in no case specify sizes or strengths of such tablets but follow the general procedure adopted by the Contact Committee.

"Also, we have suggested to the National Formulary Committee that it adhere to the tolerances and assay methods of the Contact Committee in preparing its monographs for the new edition of the National Formulary.

"We have further suggested tothe National Formulary Committee on ampoules that it follow the same principles for ampoule solutions as we have indicated is desirable for tablets; namely, not to specify sizes or strengths. We have also suggested that the Combined Contact Committees be given an opportunity of studying these monographs before their final adoption.

"Our Secretary, Mr. Frailey, has referred a communication from Dr. Leech giving the final interpretation of the Council's amendment with respect to labeling of ampoules. It is as follows:

'In the case of very small ampoules where it is practically impossible to print the explanatory statement regarding the significance of the term '—size' on either the label or the package carton, the Council has voted that the firms be informed that the Council will interpose no objection to printing the statement in clearly legible type on the side flap that folds over at the side of the carton, or on a uniform slip to be enclosed in the unit package.'"

Assay Methods

W. J. RICE, of Eli Lilly & Company, reported as Chairman of Committee on Assay Methods, in part as follows:

"Proposed U. S. P. XI method of assay for nux vomica and its preparations is based upon strychnine rather than total alkaloidal content. U. S. P. X method for determination of total alkaloids is simple and accurate and present tolerances are being met satisfactorily in manufacturing production. Should determination of strychnine alone prove less accurate, then it would seem that the change should not be made or broader tolerances adopted.

"The proposed strychnine assay is quite similar to U. S. P. VIII procedure and is based upon elimination by oxidation of brucine present in sample. Principal difference is in details of oxidation, a mixture of nitric acid and sodium nitrate solution being used instead of a diluted solution of nitric acid. Method proposed for assay of crude drug has been modified so as to be applicable to tincture.

"The strychnine assay for nux vomica, as proposed for inclusion in the U. S. P. XI, is not as accurate as the present U. S. P. total alkaloid determination. From the standpoint of analytical procedure, the total alkaloid method should be continued."

Selling Drug Products

Information of unusual value to manufacturers was revealed at the Sales and Advertising session of the A. D. M. A.

SALES and advertising problems of drug manufacturers were very much enlightened at the session of the A. D. M. A. committee on this subject which occurred on the final day of the Association meeting, under the chairmanship of S. DeWitt Clough, president of Abbott Laboratories.

J. K. Lilly, Jr., of Eli Lilly & Company, opened the session on the subject of Cost Accounting of Sales, showing how his company determined just what items were the profitable ones, and which were unprofitable, with a view to dropping items or of correcting conditions surrounding the various items so as to increase total profits.

Mr. Lilly illustrated his talk with charts. Chart A showed percentage figures for various factors for the complete line of a company's products, and for each individual product or group of products.

The chart was made up as follows:

Sales were 100%. From this was deducted Production Cost which gave Gross Profit. From the Gross Profit was deducted the Marketing Cost, which gave the Trading Profit. From the Trading Profit was deducted the total of the cost of Administrative and Research, Other Income and Deductions, and Federal Taxes, giving the Net Profit. Marketing Cost was not given as one figure, but was broken down into the following items: Detail, Sales, Executive, Samples, Branches, Transport to Branches, Transport to Trade, Sales Administration, Merchandising, Advertising, Shipping Department, and Loss on Returns.

Three other charts showed respectively the Percentage of Profit by Trading Areas; the Percentage production Cost by Trading Areas; and the Percentage of Marketing Cost by Trading Areas. These charts were extremely interesting for the reason that they included transportation charges and showed the relative figures in doing business in various parts of the country.

In answer to a question, Mr. Lilly stated that with his firm the figures for Administrative and Research, Other Income and Deductions, and Federal Taxes, were flat figures. All research is charged off at the end of the year in which it occurs and no attempt is made to charge it against particular items which may have consumed the largest part of it.

Considerable discussion followed the reading of a paper by Thurston Merrell, of The Wm. S. Merrell Company, in which Mr. Merrell gave the experiences of member firms. Mr. Lilly stated that his firm had found that it was better to bring the men to the main plant only after they had from 30 to 90 days in the field, since after a trial period they had questions to ask and were much more willing and able to absorb the information available and put it to use. Mr. Lilly said his branch managers trained a new salesman by going with the cub on the first day, the branch manager taking the bag and doing all the work. On the second day the manager generally turns the bag over to the cub and lets him do the work while the manager looks on. During the evenings at the hotels they go over the day's work together.

Turner Currens, of the Norwich Pharmacal Company, stated that it was important to get the man to organize himself, which he says he found was not always being done although a sales manager is apt to think that it is being done because it is so obviously necessary.

On the question of the number of calls which a salesman should make in a day, one manufacturer present gave the figure as ten. Others believed that this was quite impracticable if the man was to give anything of himself to the man he was calling on.

The "canned" was quite generally favored with reservations, it being realized that these can not be wholly relied upon where the prospect is a man of high intelligence. It was stated, however, that some form of approach should be given to the salesman since he is quite often unable to extract the important points from the literature which is given to him.

Rolly M. Cain, of Abbott Laboratories, opened the subject of the Success of Combination Detail and Sales Work by One and the Same Representative. Mr. Cain stated that less expense and less marketing difficulties resulted when sales and detail work were handled by the same man. Often when a detail man and a salesman are working in the same territory, the detail man will insure that the new product will be available and will take time off to sell the druggist. Many times the druggist will be oversold by the detail man to the end that when the salesman calls he finds the druggist antagonistic. Those present at the meeting felt that very moderate quotas should be set on new products so that no druggist would be overstocked, since the opinion was expressed that the druggist quickly reorders when the product is moving.

Ralph R. Patch, of The E. L. Patch Company, told from his own experience as salesman and detail man that when both things are done by the same man, the man himself knows whether or not his detailing is registering.

Turner F. Currens spoke on Coordination of Sales and Advertising, stating that the salesmen must be sold on the advertising program if it is to be most effective. Salesmen must believe in the advertising since sale of the goods after placement in retail stores is most important from the salesmen's viewpoint. Mr. Currens stated that the best way to sell the advertising to the salesmen was to let the sales manager do it since he can do it more effectively than the sales manager who can first sell it to the sales manager. The force of much advertising is lost, said Mr. Currens, due to retail price cutting. The situation exists today that if a salesman attempts to sell a retail by showing him a dominating advertising campaign which is planned, the retailer is not apt to stock heavily on the goods because he feels that if the product becomes popular the price will be cut and his profit will disappear.

Harry Phibbs, of Chicago, was to speak on the subject of Do Doctors Preserve Advertising Literature? But Mr. Phibbs really spoke on the kind of literature which doctors preserve, which he made effective through a demonstration of various pieces of literature. First he showed the modern catalog, profusely and beautifully illustrated; then booklets and brochures well presented and bound giving the physician real information on therapeutics of various diseases for which the products in question are used; then the small circular generally with a real art cover which forces the doctor to look inside; then the file card giving information regarding a specific product which he said should not be mailed broadside but should be given to the doctor by the detail man; then the blotter which uses the art work and plates already used for other advertising; and finally the desk pads containing diet list and formulas for infant feeding. These, he said, have replaced the old prescription pads.

Testing Sun Tan Products

By Gerald K. Heller

THE expensive and tedious method of determining absorptive power of drugs and chemicals with the spectograph for use in sun tan producers or sunburn preventives is unnecessary. A method has been devised which is both effective and very rapid, while the cost is negligible.

The sunrays that do the actual burning or blistering, the erthema producing rays, are between the wave length of 3000A and 3100A, while the rays up to 4500A will create a so-called sun tan. The lines between 3100 A and 3600 A will cause a slight reddening of the skin, but will not blister. A sun tan preparation, to be effective, should filter the light from 3000 A to at least 3400 A, the extreme end of the visible spectrum.

The theory of this method is based on the fact that a silver film, or mirror, will pass only the ultra violet and near ultra violet spectrum.

A piece of ordinary photographic plate glass, about 4 x 5 inches in size, is soaked in hot water to remove the gelatin, washed with soda, then dilute nitric acid and thoroughly rinsed with distilled water. The surface must not be touched, because a trace of oil or grease from the hands will prevent a good mirror from forming. A silver mirror is formed on the glass by immersion in equal parts of the following solutions:

A

Silver Nitrate C. P. Crystals ..... 5 grams
Distilled Water ..... 40 ml.

Add 10% Ammonia Water until the precipitate formed almost dissolves. If too much is added and the precipitate dissolves, a small crystal of silver nitrate should be added. Dilute to 500 ml. and filter.

B

Silver Nitrate C. P. Crystals ..... 1 gram
Rochelle Salts C. P. Crystals ..... .83 gram
Distilled Water ..... 500 ml.

Boil and filter hot.

An ordinary photographic tray will do for the silvering bath. With the silvering solution at room temperature a mirror of sufficient thickness should form in about five minutes. The mirror that forms on the bottom of the plate should be washed off with dilute nitric acid and the plate should be thoroughly rinsed in distilled water, and allowed to dry. The mirror should be just thick enough so that when the noonday sun is viewed through it, a barely visible violet-indigo spot is discernible. This filter will pass light between 3100 A and 4500 A.

For the actual test, the filter is placed in a photographic printing frame, with a piece of Azo or Velox printing paper next to the silvered side.

The chemicals to be tested are smeared on the glass side of the filter and the frame is exposed to either a sun lamp or the noonday sun. The smears of oil or materials to be tested should have a definite thickness as compared to each other. This can be accomplished by using only one drop of each substance and spreading them over circular areas of equal diameters. Very good results have been obtained with a G. E. Sun Lamp No. S 2. After exposure the photo paper is developed in the usual manner.

A smear of cottonseed oil does not filter any of the passing light, because the print, when developed, is black. A smear of cassia oil filters all of the passing light, because the print is white where the oil was smeared.

The spots developed on the print paper will vary from a dark gray to pure white, depending on the time of exposure, and the substance used. After a few experiments, a standard time can be determined and this time must be used in all experiments, so that the spots will be comparable. The usual time with mirrors of varying thicknesses is between one to three minutes.

This method, of course, determines only the filter or absorptive power of the substance.

Mouth Washes

Various types of mouth washes are popular for various reasons. This article tells of the many kinds and gives the ingredients of them.

ALL mouth washes should be antiseptic in fact as well as in theory. The difficult problem in making mouth washes is to secure some sterilization in the extremely brief period that the ordinary person holds the wash in his mouth, and at the same time to provide a pleasant taste so as to insure continued use. The antiseptic power of some of the commoner materials employed in mouth washes has been worked out by Miller as follows:

Item	*Dilution*	*Time*
Benzoic Acid	1.100	¼ minute
Boric Acid	1.50	Above 11 minutes
Salicylic acid	1.300	1 minute
Beta-naphthol	1.750	Above 10 minutes
Eugenol	1.1500	" 15 "
Iodine Trichloride	1.2000	" 1¼ "
Lysol	1.200	" 5 "
Mercuric Chloride	1.2500	½ to ¾ "
Phenol	1.100	Above 5 "
Potassium Permanaganate	1.4000	" 15 "
Saccharin Acetate	1.100	¾ minute
Solution Aluminum	1.20	Above 5 minutes
Sol. Hydrogen Peroxide	1.50	Above 6 "
Thymol	1.2000	Above 5½ "

Eucalyptus, peppermint, cinnamon, clove and wintergreen possess different degrees of antiseptic power in the order given.

As researches continue this table will undoubtedly be materially altered, it being obvious of course that the condition of the individual's mouth, gums and teeth and the concentration and type of bacteria present must affect the antiseptic power of the wash. Hence, it is good policy to be restrained in making antiseptic claims and to emphasize on labels that the wash should be held in the mouth as long as possible.

In presenting the following formulas our purpose is to aid research and to illustrate manufacturing procedure. No claims of any kind are or can be made and chemists are urged to make very careful tests before putting any of the formulas into practice.

Since any article on mouth washes would be incomplete without the inclusion of the famous N. F. 5, which has enriched the trade so much, it is given the place of honor at the head of the list:

N. F. 5

Boric Acid	25.0 grams
Thymol	1. "
Eucalyptol	5. cc.
Methyl Salicylate	1.2 "
Oil of Thyme	.3 "
Menthol	1.0 grams
Alcohol	300. cc.
Purified Talc	20. "
Water q. s. to make	1,000. cc.

Procedure: Dissolve boric in 600 cc. of water and other ingredients in 200 cc. of alcohol. Pour water solution into alcoholic solution, add talc and allow mixture to stand with occasional stirring for forty-eight hours. Filter. Add rest of alcohol and water. Add carmel coloring if desired.

An interesting variation of this follows:

Benzoic Acid	1 lbs.
Boric Acid	2 "
Borax	1 "
Alcohol	1½ gals.
Eucalyptus	3 fl. ozs.
Oil of Thyme	1 "
Oil of Wintergreen	2 "
Water	15 gals.
Carmel Coloring	1¼ fl. ozs.

Procedure: The boric and borax are added to part of water and boiled until completely dissolved; add this solution to rest of water and allow to cool. Dissolve benzoic acid in part of alcohol. The oils are added to rest of alcohol, add benzoic solution and when the water solution is cold add this to it. Mix rapidly and add carmel color. Mix again for four hours. Chill in a cooling tank and filter.

ALKALINE MOUTH WASH

Potassium Bicarbonate	21. grams
Sodium Borate	20. "
Oil of Sassafras	1. cc.
Thymol	.5 "
Eucalyptol	1. "
Methyl Salicylate	.5 "
Cudbear	2. grams.
Alcohol	50. cc.
Glycerin	90. "
Magnesium Carbonate	10. grams
Water q. s. to make	1,000. cc.

Procedure: Mix potassium bicarb and sodium borate with 100 cc. of water and when effervescence ceases add the solution to 500 cc. of water. Dissolve the oils in alcohol, add the alkalin solution, the tincture of cudbear and the rest of the water. Add the magnesium carbonate. Mix thoroughly for two hours. Allow to stand for 48 hours. Chill and filter. Purified talc may be used in place of magnesium carbonate.

CHLORO-PHENOL MOUTH WASH.

Benzoic Acid	4 ozs.
Cinnamon Oil	8 "
Phenol	6 "
Chloroform	6 "
Alcohol	150 "
Oil of Peppermint	2 "
Glycerin to make	400 "

Procedure: Dissolve the benzoic in the chloroform, add the glycerin and mix. Dissolve the cinnamon, peppermint and phenol in alcohol and mix two solutions together. Mix for two hours, chill and filter.

RESORCIN MOUTH WASH.

Resorcin	50. grams
Zinc Chloride	.3 "
Menthol	5. "
Thymol	2. "
Eucalyptol	.3 "
Camphor	.3 "
Oil of Peppermint	.5 "
Alcohol	250. "
Solution Hydrogen Dioxide	200. "
Water to make	1,000. "

Procedure: Dissolve Resorcin and zinc chloride in water, and the thymol, eucalyptol, wintergreen, menthol and camphor in the alcohol. Mix the two solutions together add the peroxide. Mix one hour chill and filter.

SALOL-THYMOL MOUTH WASH.

Salol	10 ozs.
Thymol	4 "
Oil Lavender	1¼ "
Menthol	1¼ "
Benzoic Acid	20 "
Glycerin	500 "
Tincture of Cardamom	500 "
Alcohol	2,000 "

Procedure: Dissolve salol, thymol, benzoic acid, and menthol in alcohol. Mix well. Mix tincture cardamom with glycerin, add to alcohol, add lavender. Mix four hours, chill and filter.

SACCHARIN MOUTH WASH.

Saccharin	52 grams
Heliotropine	11 "
Peppermint Oil	50 cc.
Cinnamon Oil	10 "
Tincture of Cochineal	250 "
Alcohol, q. s. to make	10,000 cc.

Procedure: Dissolve saccharin, heliotropine, peppermint, cinnamon and cochineal in alcohol in the order stated. Mix well. Chill and filter.

CONCENTRATED MOUTH WASH.

Oxyquinoline Sulphate	95 ozs.
Cinnamon Oil	62½ "
Anethol	98 "
Peppermint Oil	290 "
Alcohol	1,000 "
Water	500 "

Procedure: Dissolve the sulphate in the water. Dissolve the rest of the ingredients in the alcohol and add the oxy-solution. Mix thoroughly for three hours. Chill and filter.

Like the one given above this wash is to be used one teaspoonful in a glass of water. It can be sold ready for use by increasing water content proportionately.

SOAPY MOUTH WASH

(Favored by many because of clean after sensation said to be left in mouth).

Pulverized Castile	12 lbs.
Thymol	3½ ozs.
Menthol	3½ "
Resorcin	7 "
Glycerine	12 gal.
Alcohol	36 "
Water	60 "
Wintergreen Oil	33 ozs.
Cinnamon	16 "
Eucalyptus Oil	6 "
Carmine Solution, q. s. to color suitably.	

Procedure: Dissolve soap in water, resorcin in glycerin, thymol, menthol and the oils in alcohol. Add resorcin-glycerin to soap solution, stir, add alcohol solution, stir again, add carmine. Mix thoroughly, chill and filter.

CONCENTRATED MOUTH WASH

(To be diluted teaspoonful to glass of water).

Carbolic Acid	12½ ozs.
Glycerin	50 "
Chloroform	12½ "
Potash Solution	12½ "
Water	300 "
Tincture of Cochineal q. s.	387½ "

Procedure: Mix the first three. Mix the potash with water and add first solution. Mix thoroughly, add cochineal and filter.

ASTRINGENT MOUTH WASH.

Sodium Bicarbonate	12½ ozs.
Borax	12½ "
Zinc Chloride	1½ "
Menthol	¼ "
Alcohol	25 "
Glycerin	50 "
Cinnamon Water	200 "

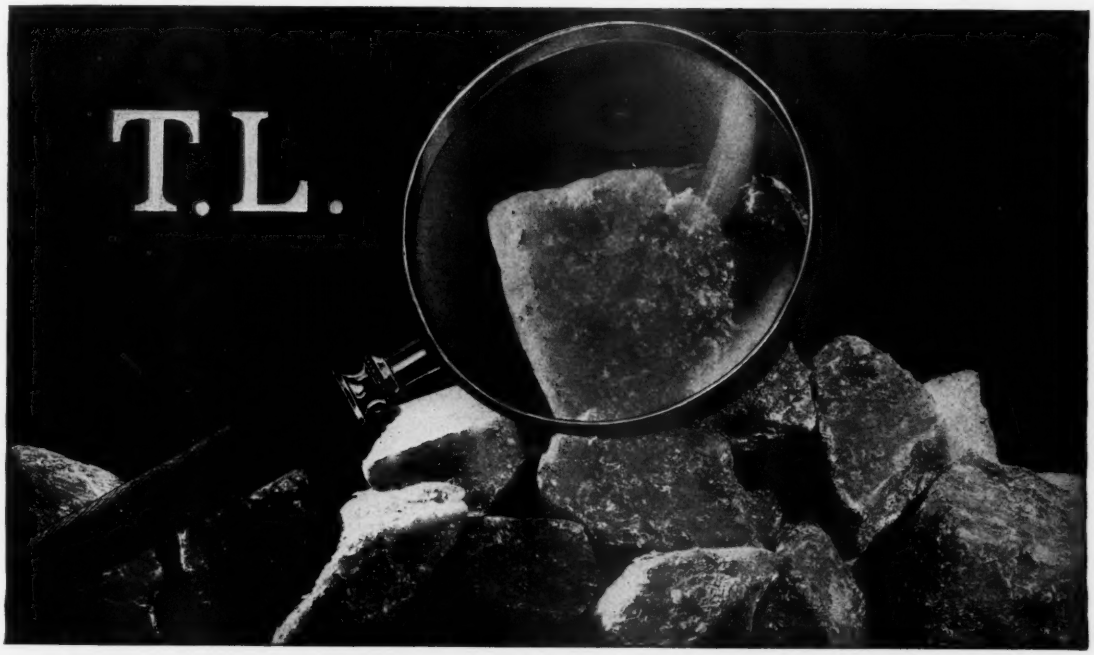
Procedure: Dissolve borax and zinc chloride in glycerin, and the sodium bicarb in the cinnamon water (which is made in the usual manner). Mix the two solutions together and add the alcohol-menthol solution.

AROMATIC MOUTH WASH.

Eucalyptol	10. ozs.
Menthol	10 "
Clove Oil	5 "
Wintergreen Oil	1 "
Heliotropine	0.1 "
Acetic Ether	10 "
Chlorophyl Ether Soluble	2. "
Alcohol, q. s. to make	1,000. "

Procedure: Add all ingredients to the alcohol one at a time, while mixing in the order given. Mix for three hours. Chill in a cooling tank to 40° F. and filter.

CLOSE INSPECTION



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Face Powder

In this article Mr. Chilson gives a concise, but surprisingly complete discussion of the various types of face powders and their ingredients.

By Francis Chilson

THE purpose of face powder is to remove shine and to conceal minor skin imperfections. This is so obvious and so thoroughly well known that reiteration should be superfluous. But an investigation of the composition of many established face powders discloses that purpose and practice seem out of harmony. Most face powders are a conglomerate of many materials, some of them unsuitable, a few of them slightly injurious. Very few face powders fulfill all the duties of a properly compounded powder; in other words they are not properly balanced. As a rule the greater the number of materials used, the greater are the chances that the formula is unbalanced. This lack of balance is one of the primary reasons why women rarely continue to use one brand of face powder for any great length of time.

In making powder, it must also be recognized that there are various types of skin and that what is suitable for a very oily skin is utterly unsuitable for a dry skin. The oily skin having a very high shine requires a powder of relatively high opacity or covering power and a higher degree of absorbency. Since the skin secretes an excess of oil the matter of adherence is of minor importance because the oil acts as adhesive. The dry skin, on the other hand, has less shine, requires less covering power and a greater degree of adhesiveness.

As there are tolerances in face powder to compensate for the innumerable gradations of skin between the extremes of the various classes, it has seemed practical to suggest that a powder suitable for a normal skin will also be suitable for one which is slightly oily, so that three grades should be enough to reach the entire market.

Right here it is well to remark that women with dry skins often create a condition of artificial oiliness by keeping an oily cream on their faces continually in which instances the appearance of their skin is similar to those which are naturally oily and hence require a different type of powder.

By common consent the trade has called these powders of varying degrees of opacity: light, medium and heavy; the first is for the dry skin, the second for the normal and slightly oily skin, the third for the very oily skin. The terms refer to the dry opacity of the various grades and not their specific gravity. It is possible to have a "heavy" powder of one type lighter in specific gravity than a "light" powder of another type.

However, all types of powder have certain qualities in common. They must all have covering power, slip, absorbency and adhesiveness. It is the variation in covering power that distinguishes a heavy powder from a medium or a light. As there are only four basic requirements for face powder, it follows that only four materials are necessary. As a matter of fact if all these qualities could be found in one material, then that alone would be sufficient. (It is our good fortune to have seen a synthetic material produced by one of the great chemical companies, which has three of the necessary qualities and we are informed that within a few months the fourth quality will have been added and a new homogeneous face powder material placed on the market.) At the present moment the desired properties are given to face powder by mixing at least four materials each of which has one quality predominating.

Thus covering power or opacity is given by titanium dioxide, zinc oxide, kaolin, barium sulphate, etc. The first three are most commonly used. Covering power is obviously the most important element in face powder. We must first secure covering power of proper opacity. If any of the above covering agents also possessed slip, adhesiveness and absorbency, we shouldn't need to use anything else. But having far too much opacity; they would coat the face like plaster. Hence they have to be diluted to secure just the proper degree of opacity for a given type of skin. Moreover, they are lumpy and have no slip; they drag. Some are adhesive to a certain extent, others lack this property entirely.

This is why talc is used. It acts as a vehicle for the covering agent, it reduces the opacity of the covering agent and it imparts the necessary mobility or slip. Thus talc and zinc oxide for instance, mixed together form a covering agent that spreads easily and uniformly. But it won't stick.

And this is why the stearates, zinc and magnesium are used; they cause the powder to adhere. Titanium dioxide has a considerable amount of adhesiveness, but not of the right character. Oil is sometimes mixed in to give additional adhesiveness but is wholly unnecessary and may even be harmful in view of the possibility of rancidity when in contact with skin secretions.

Chalk in addition to being absorbent, is also used as

(*Continued on page 487*)

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CRITICAL buyers and control chemists are particular about Lanolin today because they know that Lanolin should be practically colorless and odorless in any quantity and for every shipment.

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Misleading statements have recently been made inferring that imported Lanolin must be U. S. P. to pass the Custom House or the Appraisers.

This is not true. U. S. P. or technical grades may be imported. There is no guarantee by the Custom House or Appraisers and all Lanolin imported is not tested.

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The Compounders' Corner

Non-Irritating Depilatory

Attempts to produce a non-irritating depilatory generally impair effectiveness of active agent. Application of skin-protecting film is recommended. Such preparations are made by mixing 10 parts finely ground wood fiber with 300 parts water and 36 parts of sodium hydroxide solution (sp. gr. 1.091). Mixture is heated for several hours under pressure of 16 atmospheres at about 200° C. until complete solution is obtained. Slightly brown, opalescent solution is filtered through charcoal. Colorless, clear filtrate is dialyzed until there is no trace of alkaline reaction and is then thickened by evaporating to syrup consistency. Latter is emulsified with oily medium, such as sulfonated castor oil or mixture containing this oil and other substances. Applied to skin it protects latter from irritating action of depilatory without interfering with action of latter.

Hair Restorer

Metallic salt hair restorers are disadvantageous in giving hair metallic sheen. This can be avoided by using copper salt along with silver salt. For example, restorer may contain 20 parts silver nitrate, 10 parts copper sulfate or copper nitrate, 50 parts ammonia (sp. gr. 0.91) and 920 parts distilled water. If more ammonia is required in order to dissolve precipitate that is formed, then less water should be used. This preparation dyes hair gradually.

Styptic Pencils

Placing 940 parts pulverized alum and 50 parts borax powder in an enamelled vessel and add 850 parts of boiling hot water. Alum and borax are dissolved with heat if necessary. Then 10 parts glycerin are added, and, if desired, a coal-tar color to dye mass delicate pink or violet. Solution is poured into flat metallic molds which are slightly greased. After mass has crystallized, it can be easily removed from molds and finished off to remove rough spots.

Colloidal Kaolin in Cosmetics

Fine face powders are made from 625 parts colloidal kaolin, 185 parts titanium dioxide, 184 parts talc, 6 parts magnesium stearate. Perfume used may be 6 parts Bourbon geranium oil, 4 parts rose oil, 1.2 parts 100% heliotropin, 2 parts Java cananga oil. Color used is 2 parts carmine to obtain pink-colored powder. Rice powder is made from 300 parts colloidal kaolin, 275 parts talc, 275 parts rice flour, 110 parts precipitated chalk, 55 parts magnesium stearate and 55 parts zinc oxide. Compact powder contains 200 parts precipitated chalk, 250 parts talc, 200 parts colloidal kaolin, 50 parts zinc oxide, 20 parts bismuth carbonate and 280 parts rice flour. Another compact powder composition is 300 parts colloidal kaolin, 230 parts precipitated chalk, 200 parts magnesium carbonate, 150 parts talc, 50 parts zinc oxide, 50 parts beeswax finely grated and 20 parts bismuth carbonate. Beeswax, zinc oxide and talc are made into fine pulverized mixture and well mixed with precipitated chalk and colloidal kaolin, and finally mixed with solution of gum tragacanth, which contains 10 parts gum tragacanth to 1,000 parts water. Quantity of gum tragacanth solution used depends on quality of components of compact powder, but only just sufficient to give desired binding action should be used under any conditions. As soon as good mixture is obtained, magnesium carbonate is added gradually.

Suitable base for face paint or rouge consists of 250 parts colloidal kaolin, 200 parts magnesium carbonate, 150 parts titanium dioxide, 150 parts precipitated chalk, 150 parts permanent white, 40 parts finely grated beeswax and 35 parts gum tragacanth solution. Liquid powder is made from 250 parts of 30° Be. pure glycerin, 500 parts colloidal kaolin, 750 parts zinc oxide, 500 parts 60% alcohol and 4,000 parts distilled water. Carmine solution is generally used for coloring preparation. Compressed powder contains 350 parts talc, 350 parts rice flour, 250 parts colloidal kaolin and 50 parts zinc oxide. Powder is previously carefully mixed with solution of gum tragacanth or gum arabic before being compressed.

Water Wave Fixative

Three parts agar agar are dissolved in hot mixture of 700 parts distilled water and 300 parts glycerin and then 1.5 parts methyl para-oxybenzoate or other suitable preservative are added, as well as 10 parts perfume. If solution is turbid, it should be filtered while hot. Another composition contains 5 parts gum arabic, 23 parts sodium carbonate, 1 part sodium benzoate and 300 parts distilled water; 3 parts alkali-resistant perfume are added. Again 4 parts pulverized gum tragacanth are moistened with 8 parts alcohol in mortar; then triturated with 4 parts 28° Be. glycerin and 1.5 to 2 parts perfume are mixed in. Then 162 parts distilled water are rapidly stirred in, and mixture worked into homogeneous mass; 25 parts quince seed are macerated with 1,250 parts boric acid solution; mass is percolated without pressing. Solution is then mixed with solution of 1.5 parts boric acid in 60 parts eau de cologne; 25 to 50 parts linseed are macerated with 250 parts warm water for six hours, pressed, filtered and 25 parts glycerin added.

Birch Hair Washes

Hair wash, made from birch extract, and possessing lathering and foaming properties, contains 3,500 parts of alcohol, 700 parts water, 200 parts potash soap (best made from coconut oil), 150 parts glycerin, 50 parts oil of birch bud and 100 parts extract of spring flowers. Latter is made from 15 parts infusion of cassia, 10 parts infusion of orange, 26 parts triple extract of bergamot, 16 parts Portugal extract, 1 part sandalwood oil, 0.5 part turanol, 6 parts geranium oil, 10 parts tincture of musk, one part civet, one part lilac oil, 30 parts tincture of vanilla and 4 drops ethyl acetate. Potash soap is dissolved in 700 parts alcohol and 700 parts water. Birch bud oil and essential oil mixture are dissolved remainder of alcohol. Soap solution is added to latter in small proportions with vigorous shaking. Then glycerin is added and mixture filtered after 8 days. It is colored light greenish yellow by addition of chlorophyll and trace of saffron infusion.

Cheap hair wash of above type contains 1,000 parts birch juice, 4,000 parts water, 5,000 parts propyl alcohol, 150 parts sodium bicarbonate, 50 parts borax, 10 parts birch bud oil, 45 parts bergamot oil, 15 parts palmarosa oil, 10 parts jasmine oil, 5 parts heliotropin and 5 parts artificial neroli oil. Another similar preparation contains 5,000 parts distilled water, 5,000 parts propyl alcohol, 150 parts sodium bicarbonate, 50 parts borax, 18 parts bergamot oil, 2 parts vanillin, 10 parts geranium oil, and 5 parts birch bud oil. First, alcoholic solution of essential oils is made and then alcoholic solution of sodium bicarbonate and borax. Latter is added to former with shaking and mixture allowed to stand few days and filtered over magnesium oxide or talc.

Alcohol-free preparation contains 150 parts potash soap and 100 parts potassium carbonate dissolved in 4,500 parts water and mixed with 300 parts glycerin and 25 parts triple strength ammonia liquor. Preparation, containing alcohol, includes 1,000 parts distilled water and 1,000 parts alcohol (denatured with diethyl phthalate), also 100 parts ammonia, 150 parts sodium bicarbonate and 5 parts ethyl acetate. Part of water may be replaced by birch juice. Perfumed per 10,000 parts of mixture with mixture of 10 parts birch bud

STRAWBERRY

To capture the true delicate Strawberry fragrance, certain Aromatics are essential.
In order to avoid harsh by-odors in the finished composition, we suggest the use of the following products:

Hydroxycitronellal
Aldehyde C-16
Amyl Butyrate
Phenyl Ethyl Alcohol
Ethyl Acetate

We have developed a special line for those who prefer exquisite Strawberry compounds in the finished form. Merely a trace is necessary to obtain the desired result, and needless to say, they will not discolor in creams.

Strawberry Odor B.
Strawberry Odor D. P. 227

COMPAGNIE PARENTO, Inc.

EXECUTIVE OFFICES AND LABORATORIES
CROTON-ON-HUDSON, N. Y.

NEW YORK
507 FIFTH AVENUE

TORONTO, ONT.
73 ADELAIDE ST., W.

oil, 50 parts bergamot oil, 8 parts geranium oil, 8 parts jasmine oil, 5 parts neroli oil and 5 parts heliotropine. In case of alcohol-free hair wash, one-third of oil used should be terpeneless or little turkey red oil is added. These products easily become turbid. Colored with chlorophyll and tincture of saffron to light yellowish green. Then allowed to age and filtered.

Colloidal Sulfur Hair Lotion

Colloidal sulfur is prepared by mixing solution of 5 grams crystalline sodium sulfide in 15 grams water with solution of 2.6 grams of sodium sulfite in 50 grams water, adding 30 grams of fresh white of egg and shaking strongly for 10 minutes. Solution of 9 grams 25% hydrochloric acid in 13.5 grams water is added in small proportions and finally 75 grams of distilled water. Colloidal sulfur hair lotion can then be prepared from equal parts by volume of sulfur suspension and of alcohol.

New Salve Base

Cholesterin oil or lecithin oil, by-products in manufacture of pure cholesterin or pure lecithin respectively, are used as salve bases and emulsifying agents in cosmetics and pharmaceuticals. Water-absorbing or water-combining properties of these substances are great. Oils can be mixed with petrolatum, lanolin or mixtures and can be used in cod liver oil emulsions, silver nitrate salves, potassium iodide pastes, etc. Salve of white creamy consistency is made from five parts anhydrous lanolin, which absorbs 11.2 parts of water in original state, intimately triturated with five parts petrolatum and 0.5 part lecithin oil. Cold creams can be prepared from it. Stable salve, suitable for medicinal preparations, is obtained from five parts yellow petrolatum intimately mixed with 0.5 part lecithin oil; 100 to 150% water is added. Cholesterin or lecithin may also be present in respective oils.

White Pencil for Nails

Pencil lead consists of 160 parts light rosin, 60 parts white beeswax, 300 parts mineral oil, 500 parts white ceresin wax, 270 parts finest, pulverized kieselguhr and 170 parts zinc oxide. Waxes and oils are melted together on water bath and kieselguhr and zinc oxide are best mixed with molten mass and then mixture made into pencil lead. Nail whitening in paste form consists of 200 parts white ceresin wax mixed with same ingredients as above, or 50 parts carnauba wax, 50 parts beeswax, 125 parts petrolatum oil, 10 parts zinc oxide, 10 parts tin oxide and 95 parts kieselguhr. Good quality nail white powder or paste contains 40 parts pumice powder, 15 parts talc and 45 parts tin oxide; or 65 parts titanium dioxide, 10 parts talc and 25 parts pumice; also 40 parts tin oleate, 15 parts pumice, 45 parts titanium dioxide, colored with alizarin red and perfumed as desired. Another composition is 0.5 part gum tragacanth, 1.5 part glycerin, 1.0 part perfume, 1.0 part boric acid or 0.3 part methyl parabenzoate, 96 parts tin oxide and rose water to make paste. Nail polishing lead for pencils is made from 60 parts tin oxide, 30 parts kaolin, 5.0 parts powdered marshmallow, 5.0 parts violet root, and water and dyestuff to make mixture of satisfactory consistency.

New Chlorate Dentifrices

To aid evolution of oxygen gas from chlorate dentifrices, metallic catalysts are admixed. Thus a toothpaste contains 0.5 part gum tragacanth, 30 parts glycerine, 22.1 parts water, 7 parts potassium chlorate, 10 parts precipitated chalk and 0.1 part ammonium vanadate as catalyst. Mouth wash comprises 15% solution of sodium chlorate in 30% alcohol to which 0.5% vanadium chloride.

Turbidity of Tooth Paste

Tooth pastes, containing soap, sometimes become turbid. Presence of phenyl salicylate, usually used in small quantities, does not cause turbidity. Soda olive oil soap is responsible therefor, although solution of soap in mixture of glycerin, alcohol and water may be clear at start. Soap becomes less soluble on long standing and at low temperatures. Potash soap made from olive oil is more suitable for making soap-containing tooth pastes because it dissolves more readily and solution remains clear permanently. Since potash-olive oil soap does not lather well, about 10 to 20% coconut oil is added to stock. Presence of some coconut oil soap in mixture allows more soap to be used in making highly concentrated tooth pastes.

Preservatives for Hair Pomades

Formaldehyde cannot be used for purpose because of disagreeable odor. Suitable are 0.2% sodium benzoate, about 0.1% to 0.2% of hexamethylenetetramine. Latter is not safe when used alone but should be mixed with sodium benzoate. Sodium paraoxybenzoate is claimed effective and completely non-irritating to scalp. All named preservatives are soluble in water. Sodium paraoxybenzoate has least effect on perfumes used in compounding pomades.

Lemon Juice Creams

Keeping power of odor is not improved by addition of lemon oil or citral to lemon juice creams. Bad odor sometimes forms due to fermentation and bacterial decomposition. Good results are obtained with a preservative, such as esters of parahydroxybenzoic acid. Albumens contained in lemon juice tend to decompose most easily. Better to use a dilute lemon juice than a concentrated extract, as former decomposes less readily. Dilute citric acid is also better than lemon juice, but it does not contain vitamins and other components of natural product which are claimed responsible for cosmetic action. Addition of 0.2% lemon oil or 0.01% citral does not irritate skin. Benzoic acid, about 0.2%, is useful as preservative but sometimes irritates supersensitive skin; 0.12% of methyl parahydroxybenzoate is best. Boric acid is too weak and impairs cream.

Massage Oils

Massage oils may be liquid and also semi-solid or creamy. Oil composition contains 2 parts knee pine oil, 10 parts Siberian pine needle oil, 2 parts rosemary oil, 3 parts lavender oil, 3 parts lemon oil and 980 parts alcohol. Preparation is best colored with alcohol-soluble chlorophyll or anilin green. Color effect is heightened by addition of fluorescein. Addition of 1% to 2% of castor oil gives greasy preparation. Massage cream consists of 30 parts beeswax, 30 parts ceresin wax, 45 parts mineral oil, 45 parts water and 6 parts borax. Another composition is 30 parts lanolin, 50 parts petrolatum, 8 parts paraffin and 25 parts mineral oil. Perfumed as desired. A preparation free from mineral products and hence completely absorbed by skin contains 35 parts peanut oil, 5 parts beeswax and 60 parts benzoinated lard.

Glycerin Emulsions

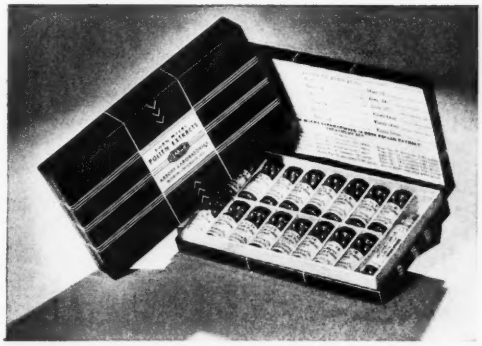
Durable and homogeneous glycerin emulsions are obtained by triturating 20 parts gum tragacanth and 100 parts eau de cologne (90% to 95% strength) in large mortar with 1,000 parts of 28° Be. glycerin. Mixture is continuously agitated and 880 parts rose water are added in small portions. Fatty emulsion is made by melting on water bath 50 parts beeswax, 80 parts spermaceti and 320 to 330 parts peanut oil. Thorough mixing is essential. Then 280 parts heated rose water are added and 250 parts glycerin. As soon as mass is homogeneous, it is removed from water bath and 10 to 20 parts perfume are added and mixed until mixture is cooled down; 1.5 parts of suitable preservative, such as methyl paraoxybenzoate, benzoic acid, etc. is added per kilogram of mixture.

Lanolin-glycerin emulsion is made by melting 200 parts anhydrous lanolin and adding 300 parts glycerin; then hot solution of 50 parts borax in 1,000 parts water is added. Mixture is strongly agitated in emulsifier and 150 parts tincture of benzoin and 750 parts clear quince slime or caragheen moss slime are added. Perfume composition used is 20 parts terpineol, 10 parts bergamot oil, 5 parts oil of wintergreen, 1 part neroli oil and 1 part heliotropin in 40 parts alcohol.

Rouge Requirements

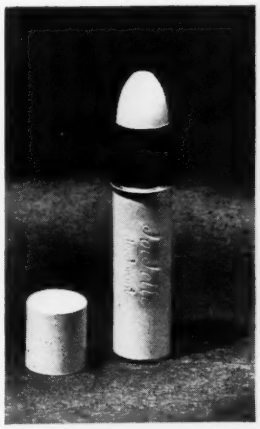
Good rouge should be as smooth as silk; its color should be uniform and free from mottling; it should spread easily and evenly; it should be soft enough to come off easily on the puff but still not soft enough to crumble. All these requirements are met in rouge samples sent this department by Sterling Manufacturing Company of Belleville, N. J.

"En Avion" perfume, a delicate bouquet odor, is the latest addition to Caron perfumes. Complementing the perfume is the face powder presented in square metal case for which refills may be obtained.

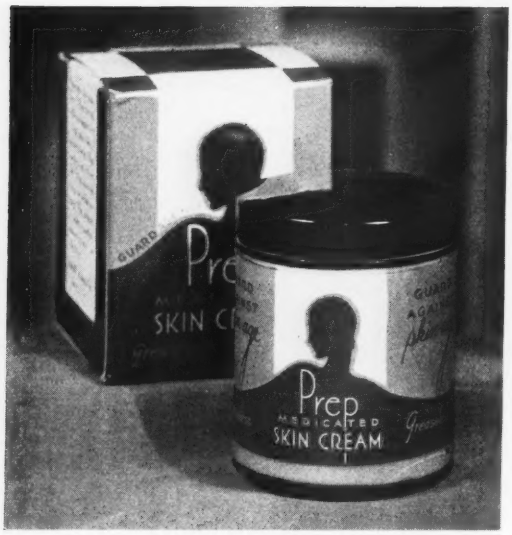


This year, Swann-Myers Pollen Extracts, made by Abbott Laboratories, are presented in an isotonic dextrose solution. This menstruum is as stable as the glycerosaline menstruum formerly used and, of more importance according to clinical data, gathered last year, is the evidence that injection is practically painless even when injected intradermally.

"Soisette," a deodorant of Harry D. Koenig & Co. is a particularly attractive new item. The delicate blue and pink case houses a deodorant stick that contains just enough oil to obviate dryness and neutralizes perspiration.

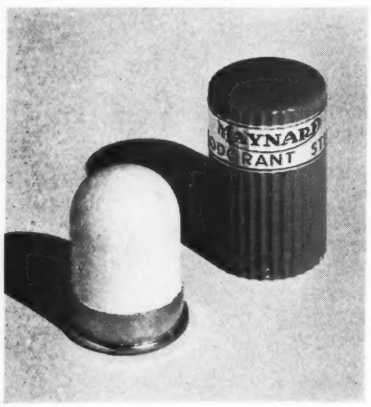


"Plastic Vegetable Masque Ritz," a special rejuvenating treatment by Charles of the Ritz, which erases the marks of time and stimulates the circulation to new vigor, is packaged in tablet form. The tablet is melted and applied with brush and allowed to dry. Fifteen to twenty minutes is required for the treatment.



Mark W. Allen & Co. has completely redesigned its "Prep" package preparatory to invading the women's market with a new skin cream. "Prep" has been sold to men as a pre-shaving beard softener. Courtesy Owens - Illinois Glass Co.

Margaret Brainard has added a "Grapefruit Nourishing Cream" to her line. It is packaged in an ivory-colored jar with the monogram of brown using the decalcomania label.



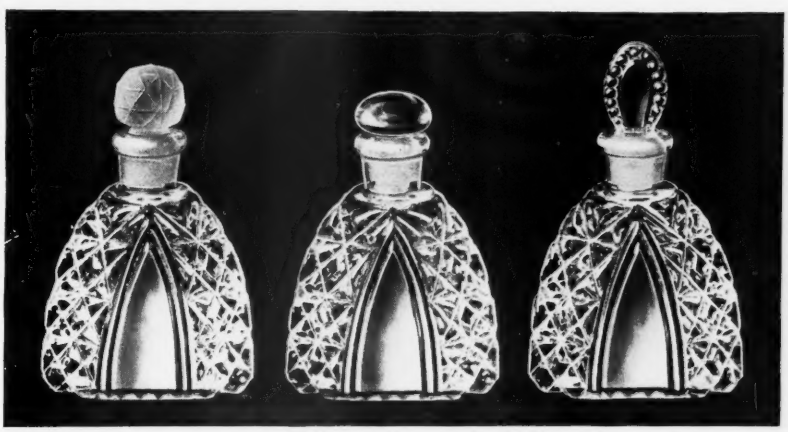
A new deodorant jumbo stick by Maynard, Inc. is presented in a green, orchid or blue case.

Every essential element of the old package, even the lady in the oval trade-mark, has been retained and improved in the modern package of the Trommer Co., of Fremont, Ohio. Courtesy Armstrong Cork & Insulation Co.

C. D. Burchard, Inc., has developed a most unusual package for its feminine antiseptic, "Duofoam." It consists of what is described as a tube within a tube. This serves to keep the two ingredients making up "Duofoam" from contact until the moment of application, when the two combine, forming an expanding, pleasant, snow-white, tenacious and stable foam.

Actual Size
One Dram Bottle
No. 343

Stopper No. "GM" Stopper No. 500 Stopper No. 1104



JEWEL-LIKE BRILLIANCE

New, gem-like bottles of unusual beauty. Cut-glass effect. Upper illustration shows dispensing type bottle, with large neck for easy filling. Molded caps, or glass stoppers in clear, frosted, black, or a variety of colors.

Lower illustration shows our latest style bottle for a standard packaged line. Variety of glass stoppers.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD.

NEW YORK OFFICE: 500 FIFTH AVE., Room 1427
Telephone: CHickering 4-0592

CHICAGO OFFICE: 1502 MERCHANDISE MART
Telephone: WHitehall 4326

Chatham Cosmetics & Drugs, Inc., is presenting its Catherine Corte line, to be sold through department stores at 25 cents. The line comprises 19 items, beautifully packaged and featuring white enamel and silver caps, making a most attractive display for milady's dressing table. This is the third line developed by Charles P. Sakin since his joining this organization as president and sales manager.

"Pulvules Lextron" of Eli Lilly & Co., contain a specially prepared liver-stomach concentrate, iron and ammonium citrate green, and vitamin B complex. They are recommended for oral use in anemia and other conditions, nine of the pulvules said to be capable of producing at least 75 per cent. as much hemoglobin as 300 grams fresh liver.

A white rubber sponge inserted in the neck of the bottle is provided for applying DePree's Liquid Deodorant. All the consumer has to do is to remove the black cap and apply directly from the bottle. Courtesy Armstrong Cork & Insulation Co.

MUCH MORE THAN *Price*

OF COURSE you want economy in the packaging of your product. But economy in closures isn't all a question of price. ◆ Closures that are difficult to apply—closures that do not seal perfectly—liners that deteriorate in use—closures that are difficult for consumers to remove—closures that detract from the appearance of your package—can prove costly, no matter what you pay for them. ◆ Here at C. C. & S. we have carefully built up a 7 Point Service to help you in obtaining the right closure for your product. It is a service that considers much more than price. For only by providing closures that are right from every angle—closures that fulfill every requirement throughout the life of your particular package—can we give you closures that are most economical for you. ◆ Why not find out the real meaning of 7 Point Closure Service and the true economy it offers in the sealing of your product? A phone call, wire or letter will bring you full particulars.

Use this **7 POINT SERVICE**

➤ EFFECTIVE SEALING ➤ SUITABILITY FOR PRODUCT ➤ EASY APPLICATION ➤ EASY REMOVAL ➤ BEAUTIFUL DECORATIONS ➤ DEPENDABLE SUPPLY ➤ NATION WIDE SERVICE

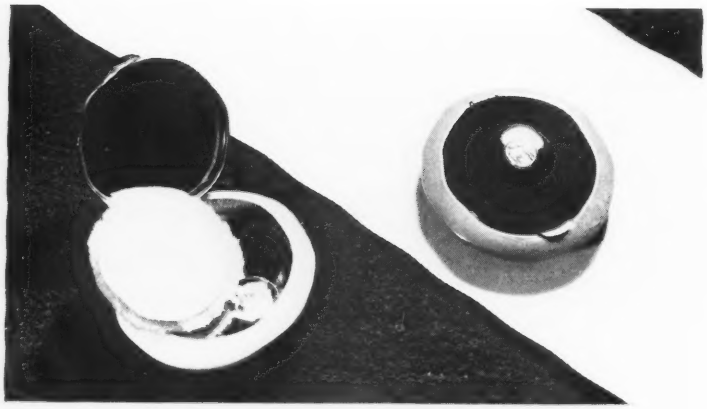
TO OBTAIN THE RIGHT CLOSURE FOR YOUR PRODUCT

CROWN CORK & SEAL CO. Baltimore Md.

WORLD'S LARGEST MAKERS OF CLOSURES FOR GLASS CONTAINERS

It's all in the **CAP**

Eli Lilly & Co. is now offering "Merthiolate Cream," which is described as an excellent skin penetrant possessing detergent, fungicidal and antiseptic properties. It contains "Merthiolate" 0.1 per cent. in a modified vanishing cream base. It is packaged in a sealed tube with key attached for puncturing the nozzle.



Compacts in green, red and blue cases, either single or double and with cake powder or loose are new presentations of Mme. Helena Rubinstein. These may be obtained in all the Rubinstein powder and rouge shades.

"Tussy Week End Kit" is a new item of the Lesquendieu line containing large sizes of cleansing cream, skin lotion, face powder, and smaller sizes of the night cream and finishing cream in tubes. The kit is effected in ivory with red and orange decorations.

Above is shown OnIzed *Amber Blake line—29 sizes always available in stock.*

All 29 Blake sizes may be had with either screw-cap or cork finish.

Above: A group of OnIzed *Containers now available in Amber Glass. Those that are not stock items may be had on special order.*

AMBER GLASS

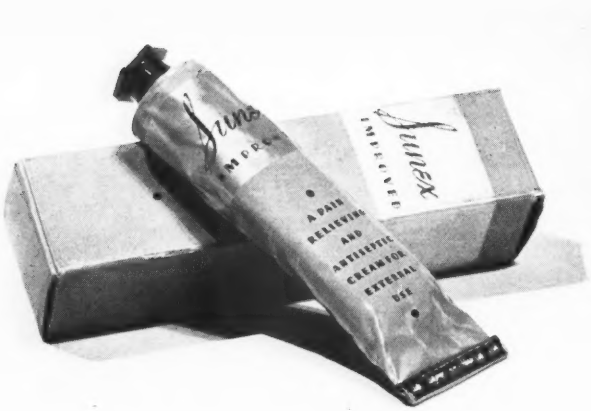
rich in color — strong in sales appeal

The popularity of *OnIzed* Blakes in Amber Glass has been so marked that we have extended the use of this beautiful color to a number of additional styles. The illustration above gives you an idea of the attractive shapes which can now be obtained in Amber Glass. Give your product a striking individuality—the distinctive beauty of these containers will set it out in strong contrast to its neighbors. Here is an opportunity for you to use this enlarged line of *OnIzed* Amber Containers and cash in on the widespread approval now given to *OnIzed* Amber Glass. Owens-Illinois Glass Company, Toledo, Ohio.

OnIzed
PHARMACEUTICAL AND PROPRIETARY WARE

1873 • SIXTIETH ANNIVERSARY • 1933

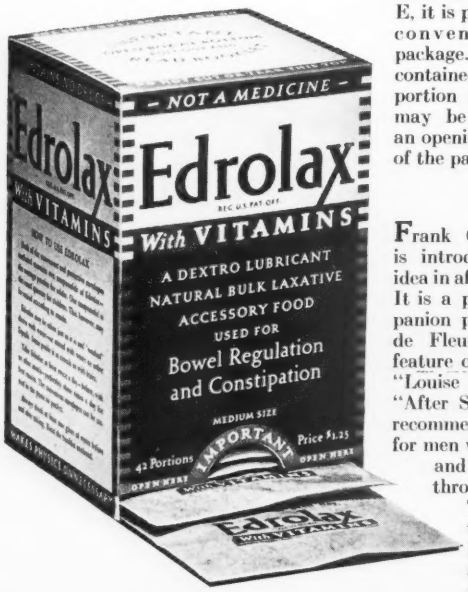
OWENS-ILLINOIS



Abbott Laboratories is introducing "Sunex" Improved for those who would tan without burning. It is described as a soothing and healing cream containing "Butesin," a local anesthetic for relieving pain, and "Metaphen," both Abbott products. It is designed to prevent and relieve sunburn, and is also recommended for burns, bruises, cuts, and insect bites.

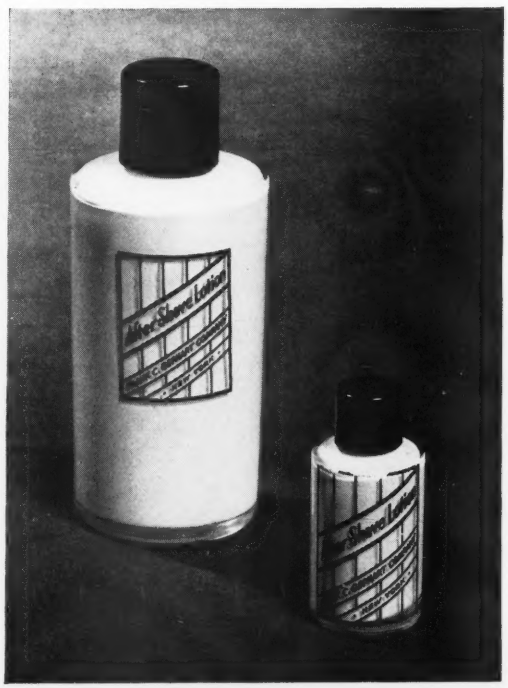
A compact in silver tone with red decorations containing "Odorono" in cake form is the latest development of Northam Warren, Inc. The powder is applied with a swansdown puff. It absorbs all odors, is of a cream color and will not stain.

Lesquendieu's "Tussy Almond Hand Cream" packaged in handy attractive black tubes with orange lettering is an ideal soap for traveling, office or club, the automobile or sport use. It leaves the hands beautifully soft and smooth.



"Edrolax" is offering a new improved product and package. Now with Vitamins B, G, A, and E, it is put up in a novel, convenient dispensing package. The product is contained in individual portion envelopes which may be extracted from an opening at the bottom of the package.

Frank C. Gephart Co., is introducing this new idea in after shave lotions. It is a parallel and companion product to "Lait de Fleur," which is a feature of the company's "Louise Curtis" line. "After Shave Lotion" is recommended especially for men with tender skins and will be marketed through drug outlets. The simplicity of the decalcomania label makes for a smart, dignified package.



CHARABOT & CO.

Superfine Essential Oils

Grasse, France

HYPERESSENCE OAK MOSS
(Colorless)
For Perfume Extracts

RESINAROME OAK MOSS
For Powders, Talcs and Cosmetics

FLUID RESIN OAK MOSS
For Soap Makers

UNGERER & CO.

ENFLORAL

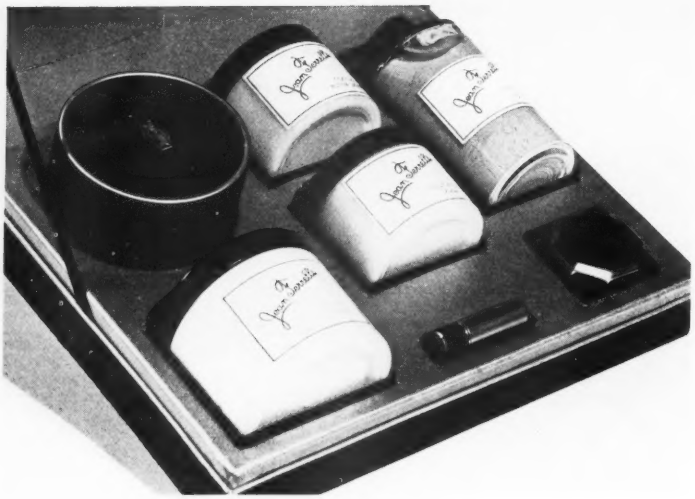
Vidal - Charvet

Since its introduction, Enfloral has been recognized as the outstanding type of the modern and unusual floral character.

Its predominant natural floral note suggests its use in the desired proportions with practically any odor to impart the floral touch, or used by itself it contributes a really splendid perfume odor.

UNGERER & CO.

13-15 West 20th Street **NEW YORK**



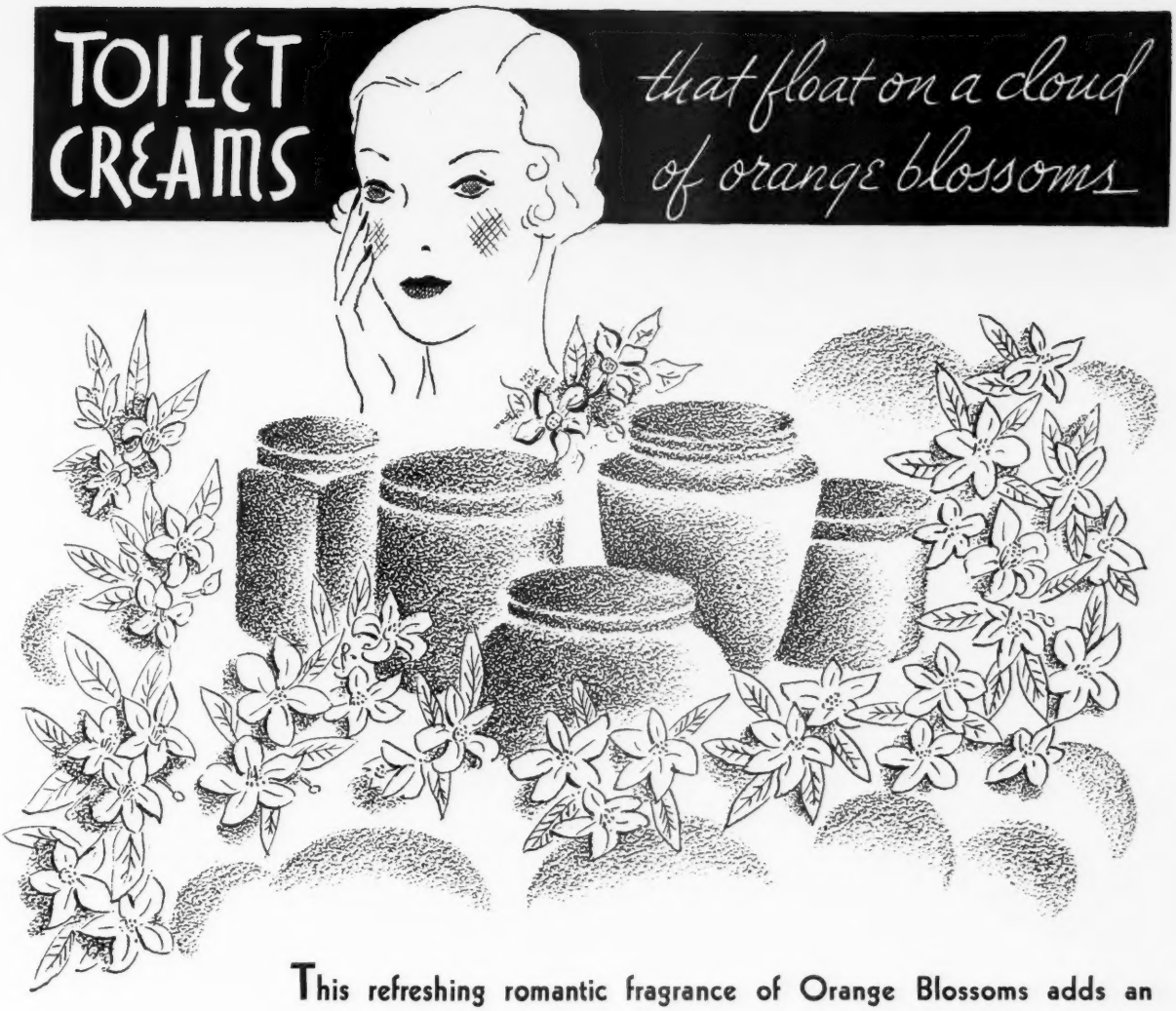
Jean Ferrell's new beauty kit contains seven items of the line—cleansing cream, medicated cream, cocoa butter cream, powder, astringent, lipstick, and compact rouge. The kit itself as well as the individual items are carried out in a silver and black color scheme.

A beauty kit for beach use containing the essentials for make up and sunburn prevention is developed by Helena Rubinstein in white cloth with various colored stripes—red, blue, yellow, green, etc. Rubber lined pockets and zipper closing are utility features of the case.

Combined into one package simulating the typical "Evening in Paris" powder box of Bourjois, Inc. is a new item containing a bottle of "Evening in Paris" perfume and lipstick fitted into compartments in the top of the powder box. This item retails for the price of the powder alone.

Superior Brands, Inc., is now marketing its "Sudan Oil," recommended for hair and scalp. It is not sticky or greasy and rinses freely, leaving a cool, clean, vibrant feeling. The decalcomania label in gold and cerise on a black background blends attractively into the package, giving it a distinctive character.

TOILET CREAMS *that float on a cloud of orange blossoms*



This refreshing romantic fragrance of Orange Blossoms adds an irresistible appeal to your toilet creams.

Orange Blossom No. 6142 may be used without blending or fortification of any kind to impart the real orange blossom fragrance. The rich delightful fragrance is so concentrated and persistent that only a relatively small quantity is needed to obtain excellent results.

We will be happy to send you working sample on request.

FRITZSCHE BROTHERS INC.

Proprietors of
PARFUMERIES DE SEILLANS
Seillans, France

78-84 BEEKMAN ST.,
NEW YORK, N. Y.

Sole Agents in U. S. and Canada for
SCHIMMEL & COMPANY
Miltitz (near Leipzig) Germany

A "Wave Setting Lotion" by Yardley & Co., Ltd. contained in bevelled glass bottles with atomizer attachment is packaged in ecru boxes ornamented with ecru labels edged with green. The lotion is non-glutinous and does not catch or hold the dust nor leave any trace on the hair after it is dry.
Two hair rinses complement the lotion, "Camomile" for fair hair, and "Henna" for dark.

Jordeau, Inc. presents its new "Zip" deodorant pencil which has several novel features, including the swivel elevator. It retails at 50 cents.

Lehn & Fink has teamed with the celebrated Olympic coach to produce this new "Lawson Robertson's Athletic Rub." The product is described as a skin penetrant, non-greasy, and with a pleasing odor. It retails for 35 cents.

Slight changes in detail of the former package of the Dorothy Gray "Sunburn Cream" have made it possible to present this item for $1.00. The cap and the omission of the characteristic blue ribbon are the chief alterations. The cream is light, delicately scented and non-greasy and vanishes immediately upon application, does not soil clothes nor does it give an oily appearance.

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A Short Catechism on Terpeneless Oils

1 What are Terpeneless Oils?
The select portion of normal essential oils isolated from the terpenes.

2 What are their uses?
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3 What advantages have terpeneless oils over normal oils?
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4 Why are MM&R terpeneless oils leaders in their field?
MM&R terpeneless oils are not experiments. They represent the experience gained through the treatment of many hundreds of tons of normal oils. Close application to detail, together with intensive study and application of MM&R terpeneless oils to commercial uses, have resulted in products that do what critical manufacturers demand. They flavor truly and keep longer.

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Flavors

Preparation of vanilla flavor is one of the primary problems in flavoring. A complete discussion of this subject is given in this first article on flavors.

FLAVORING extracts may be divided into four classes. The first comprises essential flavors which may be dissolved from natural plants by a suitable solvent as water or alcohol. The second includes those obtained by solution of essential oils. The third contains alcoholic solutions of synthetic essential flavors such as methyl salicylate, vanillin and benzaldehyde. Imitation flavoring bases made up from aldehydes, esters, ethers and alcohols are the fourth and last class.

Vanilla is an example representative of the first group of flavoring extracts. It is prepared from the beans Vanilla Planifolia. The vanillin content of the bean may vary from one to two and three-quarters per cent., but this is by no means representative of the quality or practical value of the bean.

While vanillin is a most important constituent of the vanilla bean, there are other substances such as resins and gums that contribute to the fragrance and value of the extract. The chief function of the resins is as a fixative for the delicate flavoring compounds and it is a well-known fact that an extract which contains but a small amount of these resins will not retain its value as long as an extract that contains a larger amount of them. Their ability to hold on to the aromatic compound is great. Alcohol and alkalies dissolve the resins readily, but they are almost insoluble in all other solvents and entirely so in water. The extract derives the greater portion of the dark brown color from these resins that are soluble in alcohol.

There are several methods of preparing the beans for extraction. Sometimes they are cut into small pieces and then passed between steel rollers, fairly close together; or they are ground in a suitable mill, as a sausage grinder, after the beans have been mixed with a large amount of granulated sugar. The method recommended is the one in which the beans are cut by means of rapidly moving vertical knives until a suitable state of subdivision is obtained. In the processes in which grinding, pounding or rolling are used, quite a little heat is developed and this is doubtless detrimental because of loss of flavor by volatilization. The process of cutting the beans with the vertical knives overcomes this heating difficulty and leaves the beans practically in their original condition.

Since the vanilla beans contain from ten to fifty per cent. moisture left in the curing process, this moisture must be taken into consideration when making up the alcoholic menstruum for extraction. A very good extraction can be obtained with a 50-60% alcohol but less than 50% alcohol fails to extract sufficient resins.

The circulatory displacement method has been found satisfactory for the manufacture of the extract. The chopped beans are placed in a perforated basket suspended from the sides of a larger vessel, so that the top of the basket is just below the surface of the menstruum. The theory of this method is that as the alcohol dissolves the material in the beans, the specific gravity is increased and this alcohol goes to the bottom of the container and a fresh supply rises and surrounds the beans. This process is continuous and the extraction is allowed to continue at room temperature for three months. An even superior flavor is developed if it is allowed to stand for six months. If the basket is removed and drained once or twice during the process, the extraction seems to be more complete.

The containers should be of oak and well painted on the outside to prevent undue evaporation. The basket should be of oak too, or heavily tinned metal. Metals such as copper, zinc and aluminum should never be used. By using a wooden container, the extract is partially aged in the making and this tends to improve the flavor.

If an alcoholic menstruum of a strength higher than that necessary to keep the gums and resins in solution has been used, the finished product may be diluted but the water must be added slowly and with agitation, otherwise a cloudy product results.

Sometimes the method of maceration from twenty-four hours to one or more years and then percolation is followed or the beans may be mechanically agitated in the alcoholic menstruum and then percolated.

In the government publication already mentioned, vanilla extract is defined as follows: "Vanilla extract is the flavoring extract prepared from vanilla bean, with or without one or more of the following: Sugar, dextrose, glycerin. It contains in 100 cubic centimeters the soluble matters from not less than 10 grams of the vanilla bean."

Since ten per cent. or twelve and four-fifths ounces of vanilla bean is the minimum allowed by law, as a matter of precaution, it is advisable to use at least fourteen ounces to the gallon according to the following formula:

Vanilla beans, cut very fine	14 oz.
Alcohol—190 proof	½ gal.
Water, including that naturally present in beans	½ gal.

Cane sugar, with or without glycerin, in an amount not to exceed five to ten per cent. may be added as desired.

The chemical analysis of a pure vanilla extract shows a vanillin content of from 0.1 to not more than 0.35 per cent. and a lead number of not less than 0.40 nor more than 0.80. The lead number is an indication of the amount of gums and resins in the extract. If the

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Th. Goldschmidt Corp.

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lead number is extremely low, it would be of interest to make an alcohol determination on the sample in order to find out if the alcohol used in extraction was of sufficient strength to dissolve all the gums and resins.

As this class of flavoring extracts is made up of the solution of the various individual essential oils in alcohol, their manufacture is a very simple matter. In fact, these extracts are so clearly defined by the Department of Agriculture that a formula for them is almost unnecessary. In citing examples, the definition from the Service and Regulatory Announcements, Food & Drug No. 2 (Third Revision) will be given and then a formula for preparation.

"Lemon extract is the flavoring extract prepared from oil of lemon, or from lemon peel, or both, and contains not less than five per cent. by volume of oil of lemon."

Oil of lemon	7 oz.
Alcohol—190 proof	121 oz.

Mix thoroughly, let stand a few hours and filter.

"Almond extract is the flavoring extract prepared from oil of bitter almonds, free from hydrocyanic acid, and contains not less than one per cent. by volume of oil of bitter almonds."

Oil of bitter almonds	3 oz.
Alcohol—190 proof	5 pints
Water	3 pints

Dissolve the oil in alcohol and add water gradually, shaking after each addition; filter, if necessary.

"Wintergreen extract is the flavoring extract prepared from oil of wintergreen, and contains not less than three per cent. by volume of oil of wintergreen."

Oil of wintergreen	4 oz.
Alcohol—190 proof	90 oz.
Water	38 oz.

"Anise extract is the flavoring extract prepared from oil of anise, and contains not less than three per cent. by volume of oil of anise."

Oil of anise	4 oz.
Alcohol—190 proof	1 gal.

Mix and filter, if necessary.

While it is a recognized fact that the flavoring extracts obtained from their natural sources have the most delicate aroma, it is possible to procure some of these flavors synthetically and thus make a satisfactory imitation flavor. In some instances, the imitation withstands the heat better than the natural product. Three examples of the extracts obtained by solution of the synthetic principles of the flavors are given.

IMITATION VANILLA EXTRACT.

Vanillin	7 oz.
Coumarin	1 oz.
Cane sugar	8 lbs.
Alcohol—190 proof	3 gal.
Water to make	10 gal.

Caramel color to suit. Prune juice may be added to replace a portion of the water.

Dissolve the vanillin and coumarin in the alcohol; next, dissolve the sugar in the water and mix; filter if necessary.

IMITATION ALMOND EXTRACT.

Benzaldehyde	1¼ oz.
Alcohol—190 proof	45 oz.
Water	83 oz.

Dissolve oil in alcohol and add water gradually, shaking after each addition; filter, if necessary.

IMITATION WINTERGREEN EXTRACT.

Methyl salicylate	3½ oz.
Alcohol—190 proof	76 oz.
Water	52 oz.

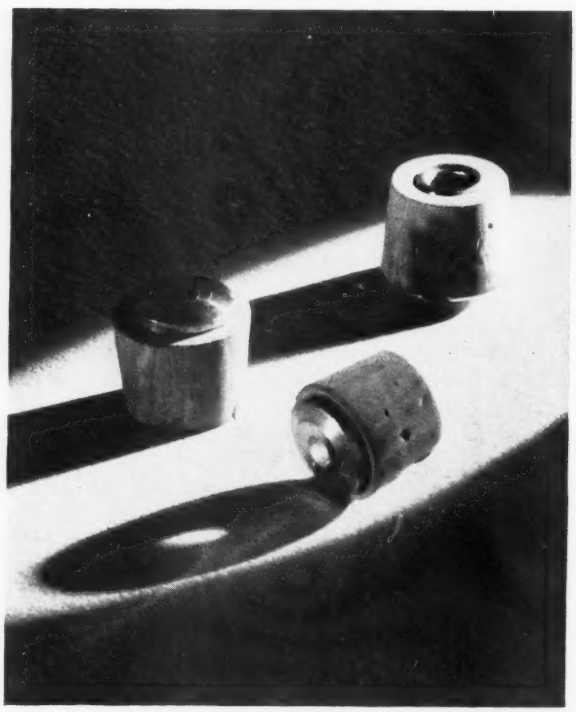
Mix and filter, if necessary.

Such flavors as pineapple, strawberry, raspberry, cherry and the like are prepared from concentrated fruit ethers. Since a large number of individual ethers are required to compound the various flavors and since there is such a variation in formulas, it is practical as well as more satisfactory to purchase from a reliable essential oil house the mixed ethers representing the desired flavors. They may then be made into the ordinary strength by a simple reduction with alcohol and water in the following proportions:

Concentrated pineapple ether	3 oz.
Alcohol—190 proof	½ gal.
Water	½ gal.

Dissolve ether in the alcohol and gradually add the water and filter.

New Shaker Tops



Ordinary screw cap bottles can be converted into shaker-tops with the new cork and metal orifice reducers introduced by Armstrong Cork & Insulation Co.

The reducer consists of a cork with a metal insert. The corks are ⅜″ long and may be had in any diameter. The top opening in the standard size reducer is ⅛″ in diameter.

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PACK-URGES*

by "Duff" Gordon

CONVENTION (A.M.T.A.) HANGOVER:

Looking back at the annual A.M.T.A. Convention, held recently at the Waldorf-Astoria, New York City, it occurs to us that it was one of the industry's most successful and most interesting affairs . . . Cecil Smith the new president presided ably and those alert and courteous members of the Entertainment Committee handled the social side of the meetings and groups to everybody's satisfaction . . . It seemed to us that the real convention was held on the 14th floor of the hotel, with headquarters in Frazer Sinclair's "Presidential Suite," . . . for it was open house and no curfew with the Drug & Cosmetic staff. I am sure that many will long remember the hospitality and good fellowship both there and in the adjoining suite where B. J. Gogarty and his Rossville associates kept things humming . . . Rupe (Ungerer) Watson had a convention of his own in the suite next door and we made many trips to hear more about Naef specialties . . . Bob Kelly carried on farther down the hall, with a "Welcome" sign set with *tested* Persian quince seed . . . Too many colorful incidents happened to bear repetition, but one highlight was the monologue that Theile of P. R. Dreyer carried on (*which has earned him an N.B.C. contract*) . . . Doc Laing of Innis-Speiden was mistaken for Prime Minister Macdonald of Breat Britain and out-burr-r-ed the newsmen till the British Premier arrived from Washington en route home . . . Ad Doolittle told stories and Tom Farrell introduced the Collapsible Tube men (*That's courage for you*) . . . And best of all, two nice box orders came our way, which we do appreciate, *for we make boxes of style and character* . . . Harry Bertram, dapper and charming as of old won the Hudnut Medal . . . (Dan (*4711*) Mulster and Fred (*T. R.*) Pope continued the tradition of being together for the banquet . . . Frank DeVilbiss Graham led the late singing . . . There were many other good fellows there, including Dex (*Primrose House*) Neal, Gifford Daggett, Dr. Salzman of Macy's, Al Rosenfeld, and those four doctors, McDonough of Marinello, Thompson of Watkins, Marsek and Frascati of Max Factor . . . Leshin of Majestic Metal and Reiner of Dorothy Gray distinguished themselves as dancing partners, with Benson Storfer running them a *close* second . . . We took every opportunity to tell our friends that we represented *National Collapsible Tubes* and saw many of our customers there, so you see we mixed business with pleasure, for after all, there are no better tubes than those we sell . . . John Kilackey, Night Manager of the Waldorf was responsible for the perfect detail which distinguished the supper dance and the banquet. He grew up with the old Waldorf . . . This was a great convention—but as we've said before, the real convention was on the 14th Floor where Frazer Sinclair and his associates made hospitality and good fellowship the keynote of each meeting . . . And then we should feel the time well spent, for it was at the Convention that we secured those tube and box orders (*We didn't go to the Convention to SELL, but we hate to refuse good business, especially when we know that we have boxes and collapsible tubes of such good quality*).

"Pack-Urges" is issued occasionally in the interests of better packages. If you wish to receive it regularly it will be sent free upon request. Address: ***H. R. M. Gordon*** *—A Complete Packaging Service—****341 Madison Ave.*** *(Phone Murray Hill 2-1626) New York.*

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Medical Opinion

(*Continued from page 409*)

combinations of copper and iron, the Council will not for the present accept combinations containing copper and iron.

Council discussed copper-iron patent of Wisconsin Alumni Research Foundation. Council feels that issuance of this patent was unfortunate; that use of name of a distinguished university whereby there is given or implied scientific approval of a product not demonstrated to be effective is to be deprecated; that government should not have issued patent; and that criticism of Foundation is that it has patented and collected royalties on a product which in the opinion of the Council is of no originality and no established merit.

Standardization of antiseptics and disinfectants is in an unsatisfactory state. Tests of these substances with cultures in test tubes give no true indication of effectiveness of germicide or antiseptic when applied to tissues, when mixed with blood, saliva and exudates and when present in body after oral administration or injection. Council at this time is not in position to recommend establishment or adoption of procedures for standardization of antiseptics and disinfectants. On other hand, manufacturers engaged in interstate commerce are required by federal government to have their antiseptics and disinfectants tested according to so-called F. D. A. method. Council voted that U. S. Food and Drug Administration methods of testing antiseptics and disinfectants, as stated in Circular No. 198, U. S. Department of Agriculture, be adopted by Council under same conditions as those relating to previous adoption of U. S. Public Health Service method of standardization of antiseptics and disinfectants.

Action of Council on Dental Therapeutics on mouth washes was discussed. Referee pointed out pertinence of remarks appearing in report of Council on Dental Therapeutics to the effect that normal persons have not been shown to be in need of oral antiseptics or astringents, and that their continued use may be harmful. He also pointed out that, in gargling, the fluid is not carried beyond anterior pillars, nor is it effective in killing in appreciable amounts such pathogenic bacteria as may there exist. It was consensus that use of antiseptic as a gargle was of no more value than use of salt water or plain water; that there was no objection to gargling per se but that there was an objection when gargling was presumed to be beneficial therapeutically because of antiseptic action; that during time so-called antispetic solution was in mouth it could exert no action which would have appreciable effect either from a prophylactic or therapeutic standpoint; that such effect as would come from gargling was mechanical and could be derived from any mild lavage either tasteful or distasteful; that while Council does not believe antiseptic gargles are effective therapeutically, this would not prevent their being used, if so desired, for cosmetic purposes.

Chemistry of the Skin

By Dr. Victor G. Fourman*

THERE has been considerable discussion among chemists and others engaged in the cosmetic industry on various problems connected with the structure and chemistry of the skin. An interesting evidence of this was the article by Dr. Brady on Cutaneous Absorption and the reply by Dr. Scheffel, both appearing in recent issues of THE DRUG AND COSMETIC INDUSTRY. There is a large amount of scientific material available on skin as a tissue in the standard works on physiology, and very detailed and technical discussions in the more specialized treatises on dermatology. It is interesting, however, that little is said as a rule, in the volumes dealing with cosmetics, on the chemical nature of the surface of the normal skin. In modern times such knowledge is becoming more and more extended, and modern manufacturers of cosmetics are seeking information on this subject in order to make their products harmonize, not merely with the fashions of the day, but with facts which have a scientific basis.

It is not the purpose of this article to go into the question of cutaneous absorption nor to deal with the structure of the skin. The writer wishes to discuss briefly some of the substances normally found on the surface of the skin in healthy condition and the significance of the chemistry involved. The oily material secreted by the sebaceous glands is known as sebum. Its exact chemical nature is not known but among the organic substances which have been isolated from it are a number of proteins and fats. Cholesterol, always associated with animal fat, and the detection of which is used by the chemist to distinguish animal from vegetable fat, is also found in this sebum secretion.

The perspiration is mainly a two per cent. solution of solids in water. About one half of the solid material is common salt. The remaining half consists mainly of other inorganic salts such as sulfates and phosphates. There are also present small amounts of urea and uric acid, as well as some cholesterol. The surface of the normal skin is usually in an acid condition because the perspiration is acidic. This acidity results from the oxidation of the fatty acids, which are the hydrolytic products of the fats. When the skin is not cleansed, urea and other nitrogenous substances from the perspiration, gather on the skin surface. Bacteria settling on the skin convert these products into ammonia and ammonium compounds which are alkaline in reaction.

Now it is well known that an alkaline medium is more favorable to the growth of most bacteria than an acid medium. Should, then, a satisfactory cosmetic for the skin have a slightly acid reaction. Some chemists support this view. However, it must be kept in mind that while the nature of perspiration is acidic, and hence it protects us against many bacteria, an alkaline perspiration sometimes is present on a normal skin. Is it possible that this alkalinity prevents the skin from

*Chief Chemist, Compagnie Parento, Croton-on-Hudson, N. Y.

(*Continued on page 486*)

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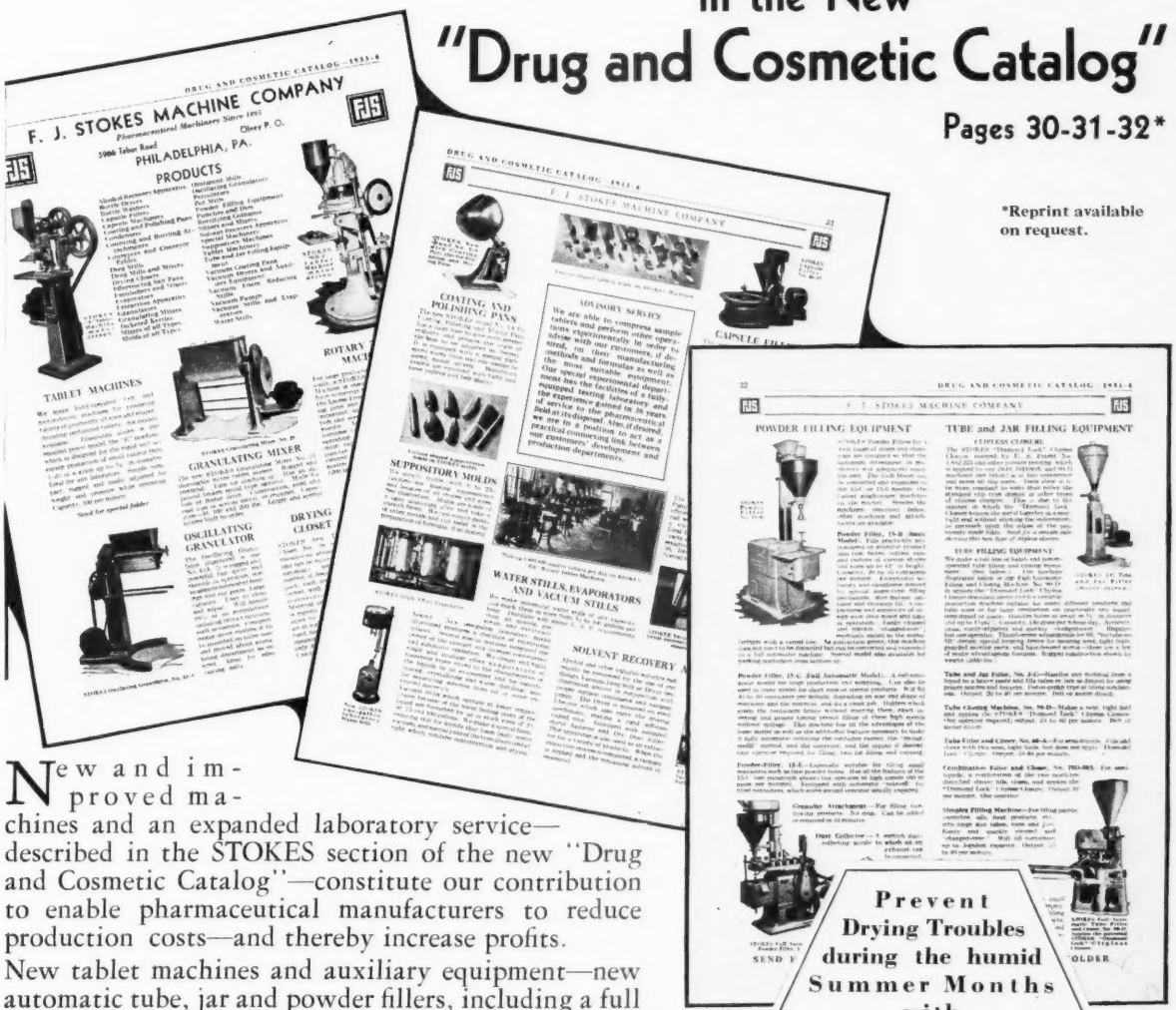

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Management Forum

By Francis Chilson
Production Engineer

Filters and Filter Aids

We have had some interesting correspondence with Mr. I. H. Risser, Chief Engineer of U. S. Bottlers Machinery Co. regarding the many complex problems associated with filtering and we are pleased to present here a resume of that correspondence. The type of filter selected is very important, but it is probable that the selection of the right filter *media* is even more important. One thing is certain about filtering and that is you cannot filter everything in exactly the same way and with identical *media*. There are times when a loose textured pad is essential and other cases where an extremely fine textured pad must be used to produce the best results. Of these manifold problems Mr. Risser says:—

"When attempting to solve a filtering problem we are interested not only in a clear and brilliant filtrate, but also in the cost of the operation.

Since there are over 300 grades and types of filter papers, asbestos discs, filtermas sheets, etc., it at first appears impossible to consider making a selection. Of these, however, about twenty varieties and grades of paper which with or without the use of a filter aid will give praiseworthy results in the filtration of most every type liquid, and seven or eight are exceptionally interesting, for when used in connection with a filter aid, they produce the desired results at a minimum filtering cost.

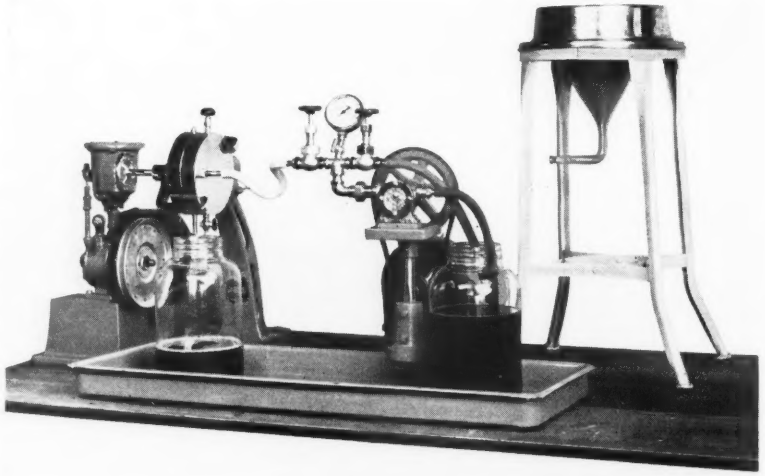
It is very essential when selecting a filtering medium to select one which will give the maximum capacity of filtered product obtainable per square inch of filtered surface. It is possible to reduce the initial cost of the filtering equipment as well as the repeat cost of the filtering medium by using care in making this selection.

If the medium is very costly per square inch of surface, even greater care should be used as in the case of the asbestos disc and filtermas disc. Why this care should be exercised is shown by the results obtained from the following test runs. The same product was used in both cases, but on the first test a single polish paper and a good grade of open texture paper was used for the media. The actual filtering area used was twenty square inches. The rate of flow per square inch of exposed surface at a pressure of ten pounds per square inch was approximately 3.4 ounces per square inch of filtering surface per minute. The approximate cost of the polish paper used was .0115 of a cent per square inch; and the approximate cost of the filtering paper was .019 of a cent per square inch, giving a total cost of approximately .0205 of a cent per square inch of filtering surface. Using an asbestos disc of exceptional filtering quality under the same conditions on the same product in testing, we find the rate of flow was approximately 2.1 ounces per square inch. The approximate cost of the asbestos disc was .18 of a cent per square inch.

RESULTS OF TEST

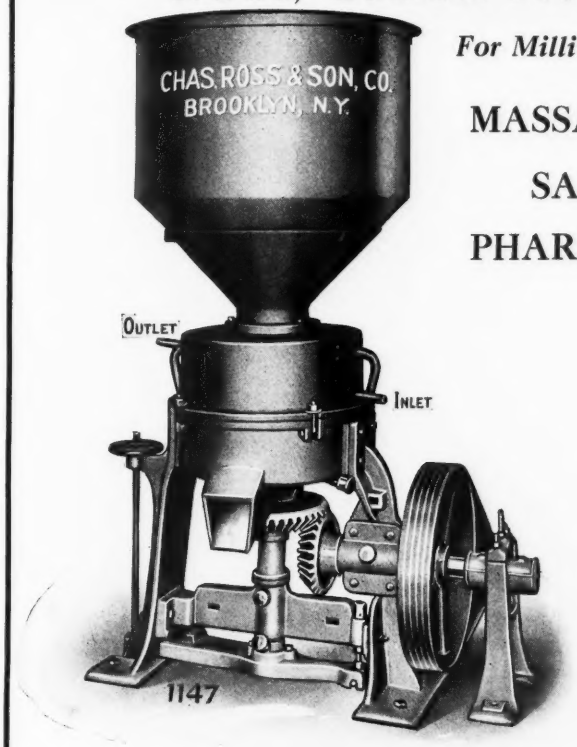
Upon examining carefully the two resulting filtrates, it was found they were both of equal clarity and brilliancy. The results of this test clearly show how essential it is to pick the proper medium to reduce filtering costs and also why it is important to give careful consideration and thought to each individual filtering problem. The expensive filter disc used was of far too fine a texture to use on filtering this product. It not only was an expensive medium, but actually reduced the capacity of the press, due to the inability of the tighter packed filter medium to pass the product as rapidly as was desired. Had the product contained a precipitate which was much more finely divided, it would possibly have passed through the two papers originally used on the first test, in which case it would have been necessary to choose the asbestos disc or a paper disc of harder and heavier texture. This also clearly shows that a filter or press must be able to handle not only the thin paper sheet, but the heavier sheets, the asbestos discs, etc., as well; or a combination of paper and a filter aid, or a combination of a cloth and a filter aid.

The advantages of having a variety of filtering media to select from are easily seen. First, it permits selection of the filtering medium best suited for a particular liquid, naturally resulting in a clearer product. Secondly, the cost is considerably reduced, as some products do not require as expensive a filter paper, disc or pad as would be necessary were only the close grained and most expensive type medium used exclusively. Thirdly, the cost of filtering is further reduced, due to the increased capacity and time saved by increasing the flow per square inch of filtered surface. The best types of filters and presses are manufactured to preserve the paper and facilitate effective changes. Manufacturers who have taken cognizance of these factors in designing their presses and filters should be in a position to advise definitely regarding the cost per square inch of surface of the



Filter Testing Unit

ROSS, Conical French Buhr Stone Mill



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When selecting a filter it is well to bear in mind that while the initial cost may be slightly higher in one case, the prohibitive cost of an improper filtering medium can be destructive in the other case."

Cosmetic Claims

At the recent convention of the A. M. T. A. a representative of one of the larger advertising agencies waxed hot over false claims made for cosmetics. He "viewed with alarm" the ballyhoo which is injuring the industry. He requested that the trade take steps to purge itself. Coming from an advertising man such a declaration seems to us to be very funny. It illustrates the sorry pass to which most advertising agencies have come; they would expiate their own sins by visiting them upon the heads of others. Who makes these false claims? Answer: advertising agencies seeking to give a fresh zest to copy. Who is writing the radio ballyhoo about which the speaker waxed wroth? The chances are 1,000 to 1 that it is being written by some fair haired advertising "expert." We of the trade sometimes give the agencies handling our advertising a somewhat overestimated statement of the virtues of our products. That's all that's needed to send forth a gush of inane balderdash. If we must reform let's start with our agencies.

Another point which was made by the speaker in connection with the campaign now going on in several magazines to persuade women to buy only nationally advertised—and that means consistently advertised products—and the inference drawn is that unless a product is nationally advertised it is *non compos mentis*. Phooey! We know from personal experience that some of the best products in the trade are made by concerns which are not big-scale advertisers. We also know that some of the firms that do a lot of advertising have no technical background whatever. Some of them have never employed a chemist of any description. So what are the advertising agencies going to say to women who follow their advice and then find that nationally advertised cosmetics are not all so hot?

New Equipment

One of the oldest builders of homogenizers has introduced a new model in a relatively small size and of an extremely high degree of efficiency. This company's homogenizers are already being used for oil and agar emulsions, cod liver oil, milk of magnesia, colloidal suspensions, etc. The dope on this machine will be given to interested parties.

F. J. STOKES

Crystal Corporation, manufacturers of Outdoor Girl face powder and Z. B. T. talcum have just completed the installation of a new F. J. Stokes powder filling unit which was designed to deliver 75 small boxes per minute. The machine fills with an accuracy of 1% plus or minus and a no-container-no-fill-mechanism, together with a unique dust collecting system makes the fill cleaner than any we've seen. The machine is a very compact job and a compliment to both Crystal and F. J. S. John Silver of F. J. Stokes will be glad to give you full dope on this unit. Drop him a line.

Powder Filling in Crystal Plant

MIXING EQUIPMENT

Mixing Equipment Corporation has developed a new continuous liquid mixer of unique design. The machine has already been used for making exceedingly difficult emulsions and several of them have been in continuous operation for many months. At the present time the company has available only the very large units suitable for large production of cod liver oil or mineral oil emulsions. This machine is neither a colloid mill nor a homogenizer, but is said to do the work of either, either on a continuous or a batch basis. Mr. Craddock tells us that smaller units will soon be available.

NEW HAND CAPPER

Consolidated Packaging Machinery Corporation has given us an advance tip that they will soon have available an exceedingly efficient and inexpensive hand capper for small run work. Later we'll have fuller dope.

ETCHING INK AGAIN

The etching ink about which we wrote a few columns ago proved to be punk. All we've been able to get so far is the stuff which is used for etching razor blades and that is made only in white. We have however located an outfit that makes both the etching ink and metal stamps of all kinds for using it.

Pneumatic Scale Asks You

In a circular sent out by the above company two pertinent questions of deep interest to all production men are asked; their purpose being to obtain the consensus of opinion of packaging machinery users to aid the company in formulating future policy:—

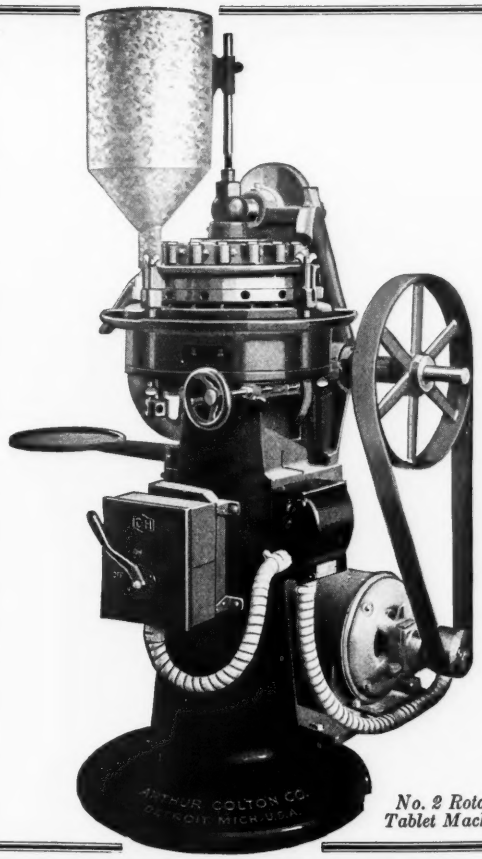
"In your opinion should the manufacturers of packaging machinery work toward obtaining greater flexibility in designing future automatic equipment, or should they strive to produce single purpose machines of even greater speed.

"In the light of today's and tomorrow's needs, in view of rapid changes taking place in the design, the sizes and the character of product containers, which include packages, bottles and cans, which of these factors do you believe will be the most important requirement of packaging machinery in the future. Speed? Flexibility?"

These questions really are identical. Speaking as an individual production man we'd like to offer the opinion that both will be necessary, speed and flexibility, especially in our trade, which has not been injured by the depression to any appreciable extent, and in which public loyalty clings to established trade names. In view of this latter consideration single-purpose, high-speed machines will always be in demand. But the high speed single-purpose machine has and probably always will be in smaller demand than the multi-unit flexible machine. There are extremely few houses of great size which do not need both types. The rule in this trade is that while houses like Bristol-Myers or Squibb or Parke Davis or William S. Merrell all have certain specialties which are sold in sufficient volume to keep single purpose machines going steadily, they also have a vast number of lesser products which must be run in small batches through machines that can be adjusted for different products and many different sizes and types of container. They all also have many minor products that are largely put up by hand.

We think that what will happen in the future is a change of emphasis in selling equipment. The flexible equipment will be stressed by big equipment houses which have built up reputations as builders of high speed expensive equipment. Some of these houses, although they always have built flexible, semi-automatic equipment, have lost business because having always stressed the automatic stuff. They have reached a point where nobody knows that they also build the smaller units too.

In the past the small manufacturer was allowed to go hang and the innumerable small run products of all the larger houses were not given much more consideration. Right here's the untapped market. We think that equipment dealers selling this trade will do a thumping big business in units costing less than $2,000 and even larger in units costing less than $1,000. It seems to us that the big houses have reached their full stature while the small ones will continue to grow.



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.

Detroit, Michigan

NEW!! #8A DIRECT MOTOR DRIVEN

TUBE AND JAR FILLER

Introducing the Rodgers standard filler with direct motor drive. This is the cheapest power filler on the market today. It has a capacity up to 50 per minute. Full details and prices on request.

Our latest catalog of drug and cosmetic machinery is now available. We shall be glad to send you a copy. It includes specifications on:

Filling, Closing and Clipping Machines
Powder Mixers & Sifters
Paste & Cream Mixers
Portable Electric Mixers
Bottle Fillers
Powder Fillers
Ointment Mills
Rotary Pumps
Centrifugal Pumps
Jacketed Kettles
Glass Enamelled Tanks

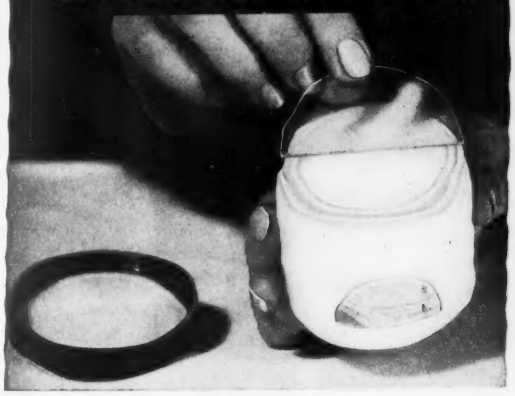
GEORGE G. RODGERS CO.

25 DEY STREET — **NEW YORK CITY**

BARCLAY 7-4851 — **Established 1890**

"FILMA-SEAL"

(the double seal of cap and film)



Is used on many Nationally known products.

PREVENTS

EVAPORATION — LEAKAGE — TAMPERING

Send us a few of your packages to "FILMA-SEAL" and we will prove its advantages to you.

FERDINAND GUTMANN & CO.

Brooklyn, New York

Trade Marks Reg. — Pats. Pending

News

Regulatory

New Food & Drug Act

Rumors to the effect that a new federal food and drugs act was being prepared by the Department of Agriculture for introduction in Congress led manufacturers to request that they be allowed to see the draft of the bill before its introduction so that they might make suggestions as to the practicability of such legislation. A conference with manufacturers was called by Assistant Secretary of Agriculture, G. R. Tugwell on April 27.

Representative of recognized trade groups only were admitted. Secretary Tugwell called the conference to order; bowed out, and left Chief of Food and Drug Administration, Walter G. Campbell, in charge.

Mr. Campbell stated that the department had no legislation drafted, but would be pleased to hear from the trade just what they thought should be put into such legislation. Trade representatives, sorely disappointed and not agreed upon any proposals were unable to present any concrete suggestions.

However, one of the group, Charles Wesley Dunn, representing the American Pharmaceutical Manufacturers Association and a cosmetic manufacturer (Armand Co.), was well prepared and offered the following changes in the act:

Secs. 1 and 2: Should be revised to adequately increase the fine penalties. There should be a greater latitude of discretionary powers in the court with respect to the penalties to be imposed.

Secs. 3 and 5: Should be revised to clarify and improve its administrative provisions; for example, to make clear the power of the Secretary of Agriculture. There should be a clear revision of the apparent conflict of power between the three secretaries (Agriculture, Commerce and Labor) on the one hand, and the Secretary of Agriculture on the other. Administrative power should be placed exclusively in the hands of the Secretary of Agriculture, as he is the responsible officer who actually enforces the act and should be given commensurate power. These sections should also be clarified with respect to the methods of analysis used under the act to make those provisions more definite and certain.

Sec. 6: Should be amended to include any mechanical article or device or apparatus which is recommended for medicinal use in order to prevent any deceit in their sale. Should also be amended to include obesity and beauty preparations and cosmetics, to prevent the addition of any ingredient which may or does render the product injurious to health, to require the label declaration of any ingredient the use of which should be disclosed to public information and to prevent any false representations in their sale. Should be further amended to make the U. S. P. and N. F. definitions of the term "drug" subject either to the approval or the promulgation of the Secretary of Agriculture.

Sec. 7: Should be amended so as to prevent the sale of any alleged medicine which, even though used as directed, is dangerous to the public health or to life. Should be further revised to some extent with reference to U. S. P. and N. F. provisions to make them unquestionably constitutional—can be done by making these standards subject to approval or promulgation by the Secretary of Agriculture. Further, some provision should be made which would empower the Secretary of Agriculture, in case public interest requires him to do so, to revise or supplement the official standards upon consultation with the makers of those standards, acting in conjunction with them. (In fact, he said, he would go so far with respect to this section as to suggest a very thorough consideration of the question whether the present method of making the legal drug standards under the act is the one that should be permanently written into the act as a matter of public policy).

Sec. 8: Should be amended to require a drug to be labeled to indicate the name. Should further require in the label the name of the maker or responsible seller, and the origin of the drug should be disclosed. Should be amended to require drugs to be labeled as in the case of food, to indicate the weight, measure or numerical count, subject to a reasonable tolerance or variation as in the case of food. If the list of dangerous ingredients which are required in the label declaration with respect to drugs requires any enlargement in the public interest and if there is any present need for revising that list, this should be done.

(Mr. Campbell: Have you any ideas about any such method of declaration? Just the name of the drug?

Mr. Dunn: I should think the present plan would be sufficient.)

Should carry a prohibition against deceptively used, slack-filled containers in the case of drugs. Should be amended to prohibit any false advertisement of drugs so as to deceive or mislead the purchaser. Should not contain any provision for required governmental censorship of an advertisement in advance of its use.

In expanding his statement regarding advertising, Mr. Dunn declared himself not in favor of making advertising agency and publisher legally responsible; the vendor of the product, who is the advertiser, should be solely accountable; this will cause those who assist him (advertising agency or publisher) to comply. He further said that if a product and its label comply with the law and the advertisement is false, the penalty should be directed only against the advertisement. He favored a provision which would give the advertiser an opportunity to correct an objectionable advertisement and permit resort to criminal prosecution only where that is required in the public interest.

During the latter part of the day Mr. Campbell suggested the following:

1. Elimination from the Act of the deviation or variation clause.

2. Licensing of manufacturers, which was endorsed by Mr. Dunn.

Repeatedly during the day representatives of the various groups made the request that after the Department had drafted a bill and before its introduction in Congress, that the measure be submitted to selected representatives of the drug trade for consideration. While Mr. Campbell did not say that this request would not be granted, he nevertheless indicated that it was not in line with the policy of the Department.

The Department continued to hold meetings throughout the latter part of the week, and Dr. Paul Nicholas Leach, Secretary of the Council on Pharmacy and Chemistry of the American Medical Association, made the following suggestions:

1. Full label disclosures of the formula; 2. Control of advertising; 3. That testimonials be signed and made subject to the provisions of the Act; 4. Inclusion of cosmetics to the end that deleterious substances be eliminated from these preparations and that the advertising of them be controlled; 5. The licensing of manufacturing establishments producing biologicals and arsenicals. He indicated opposition to licensing generally. As we understand it, the manufacture of biologicals and arsenicals is now controlled; 6. That the U. S. Pharmacopoeia and the National Formulary be no longer used in the fixing of official standards, but a Government body be set up to define legal standards and formulae for drugs and medicines, such body to be composed of representatives of the Government and the various interested industries and professions.

People

Mrs. Ritchie President

Mrs. Harold F. Ritchie, widow of the founder of the Ritchie industries, has been named to succeed her husband as president of the Harold F. Ritchie Co., Toronto; Harold F. Ritchie Co., Inc., New York; and the British Harold F. Ritchie Co., England. C. M. Hemming, in charge of the British office for some years, has been named vice-president; while Ruthven Hay, closely associated with Mr. Ritchie, continues as managing director. Other officers are S. M. Screaton, director of sales; J. H. Spence, secretary, and C. H. MacDougall, treasurer.

MANUFACTURERS OF

PHARMACEUTICAL and COSMETIC WHITE OILS and PETROLATUMS

● WHITE OILS, U. S. P.

HEAVY-LIGHT

We manufacture and offer the highest grades of U. S. P. White Oils obtainable. They are absolutely odorless, tasteless and colorless.

Our list of these oils covers a wide range of viscosities and a wide range of gravities.

Any Viscosity.....From 50 to 350 Saybolt @ 100° F.
Any Gravity.....From .820 to .900

MARCOL WYROL PRIMOL

Brand names which are a guarantee of finest quality.

These oils have for years set the standard for the best in White Oils. PRIMOL for Pharmaceutical purposes and MARCOL and WYROL for COSMETIC and TOILET Preparations are used throughout the world by the manufacturers of the finest preparations.

● WHITE OILS, INDUSTRIAL

HEAVY-LIGHT

A similar wide range of viscosities and gravities is offered in our list of colorless Industrial White Oils. Any viscosity or gravity in the above range is available.

In the general manufacture of cosmetic and toilet preparations these White Oils find widespread use. An outstanding value is offered in the popular brand:

BAYOL

Saybolt viscosity @ 100° F.	80/90
Specific gravity	.845/.855

● PETROLATUMS, U. S. P.

	Melting Point A. S. T. M.
Snow White Parmo No. 1	125/129° F.
Snow White Parmo No. 2	115/120
Lily White Parmo	115/120
Ex. Light Amber Parmo	115/120
Amber Parmo	115/120

Parmo is our brand name for Petrolatum and is very well known to pharmaceutical, cosmetic and toilet preparation manufacturers, having a well established reputation over a long period of years for quality and uniformity.

All products are guaranteed as to quality and uniformity. Specific information and experimental samples furnished on inquiry. Our technical staff will be pleased to assist you in your problems.

STANCO DISTRIBUTORS, Inc.

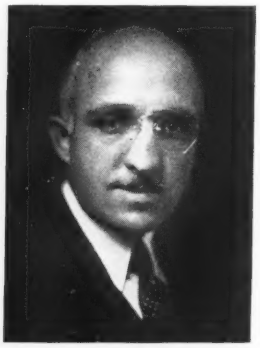
2 PARK AVENUE, NEW YORK, N. Y.

Plant, Bayway, N. J. **Warehouse, Chicago, Ill.**

Frascati & Marsek to Factor

Max Factor & Co., Inc., Hollywood, Calif., has announced that it has retained Dr. A. T. Frascati and Dr. F. A. Marsek—the former to advise on perfumes and perfume materials and the latter on rouges and lipsticks essentially.

Dr. A. T. Frascati is well known to this industry having had a varied experience both in research and in production. He is a graduate of Syracuse University and his



Dr. A. T. Frascati

former connections in this field include Givaudan-Delawanna, Inc., Parfumerie St. Denis, and Ungerer & Co., all of New York. He was most recently in charge of the perfume and service laboratories of the latter company, until his resignation several months ago to enter the consulting field.

Dr. Marsek was one of the founders of Kolmar Laboratories, Milwaukee, but resigned from active participation in that business six years ago to go to New York were he established himself as a cosmetic

Dr. F. A. Marsek

consultant. Some of his other previous connections include Carlova, Inc., Binghampton, N. Y., Palmolive-Peet Co., Chicago, and United Drug Co., Boston.

Both Dr. Frascati and Dr. Marsek were retained by Max Factor & Co. upon a recent visit to New York of Davis Factor, Frank Factor and other members of the organization. At that time, H. Hilfer, formerly of Capitol Analytical Laboratory, New York, was added to the laboratory staff.

Joe Franks Recovers

Joseph M. Franks, president of the Franks Chemical Products Co., Brooklyn, has returned to his desk after an absence of almost two months due to injuries sustained in an automobile accident.

Walker New Manager

Coleman G. Walker has been appointed New York manager of the Battle Creek Food Co.

Kirby Heads New Department

Dr. Frank B. Kirby, for seventeen years sales manager of Abbott Laboratories, North Chicago, has become director of education for that company. This is a new department having to do with educating salesmen, new and old; also various contacts with trade journals, medical groups and drug groups.

Smith Jamieson Treasurer

Gerald Smith has been elected to the Board of Directors, and appointed secretary and treasurer by C. E. Jamieson & Co., Detroit.

Mason Joins Arner

W. A. Mason, for 24 years associated with Strong, Cobb & Co., Cleveland, has been appointed superintendent of the Arner Company, Inc., Buffalo.

Jackson Studies Packaging

To assist in the carrying out of their recently announced expansion program, Abbott Laboratories, North Chicago, Illinois, has selected a committee with C. R. Jackson, Advertising Manager, as chairman, to study ways and means of improving packages and packaging methods.

Suttar Joins Glayfield

M. Suttar has become associated with the Glayfield Drug Co., New York, as cosmetic chemist. The company manufactures both drugs and cosmetics and is best known for its "Sylva Cross" line.

New Werk Officers

Howard Dock, formerly vice-president, has been elected president of M. Werk Co., Cincinnati. Albert G. Schwartz is vice-president and Louis Werk, secretary-treasurer.

New Watkins Vice-Presidents

D. C. Alexander and R. C. Boalt have been elected vice-president of the J. R. Watkins Co., Winona, Minn.

Matchabelli's New Sales Manager

Alexander Tarsaidze has been appointed sales promotion and advertising manager of Prince Matchabelli Perfumery, Inc., New York.

Weston With Budd

Clifford Weston, formerly a member of the sales force of Givaudan-Delawanna, Inc., New York, has become associated with Budd Aromatic Chemical Co., that city.

Cunningham With Feminine Products

Edward F. Cunningham, who was for twelve years with the Lehn & Fink Products Co., has joined the Feminine Products, Inc., New York.

Trevillian Foils Kidnappers

William Trevillian, vice-president, W. T. Rawleigh Co., Freeport, Ill., submitted to a kidnapping, May 8, and as a result aided the authorities in the capture of two men plotting to hold him for $10,000 ransom.

Fraenkel Heads Stearns Sales

E. V. Fraenkel has been appointed sales manager of Frederick Stearns & Co., Detroit, succeeding William Bomar.

The Colonel Tastes Water

Col. Joseph Wrench is fast becoming the country's most famous water-taster. So much so that only the other day when he

Col. Wrench

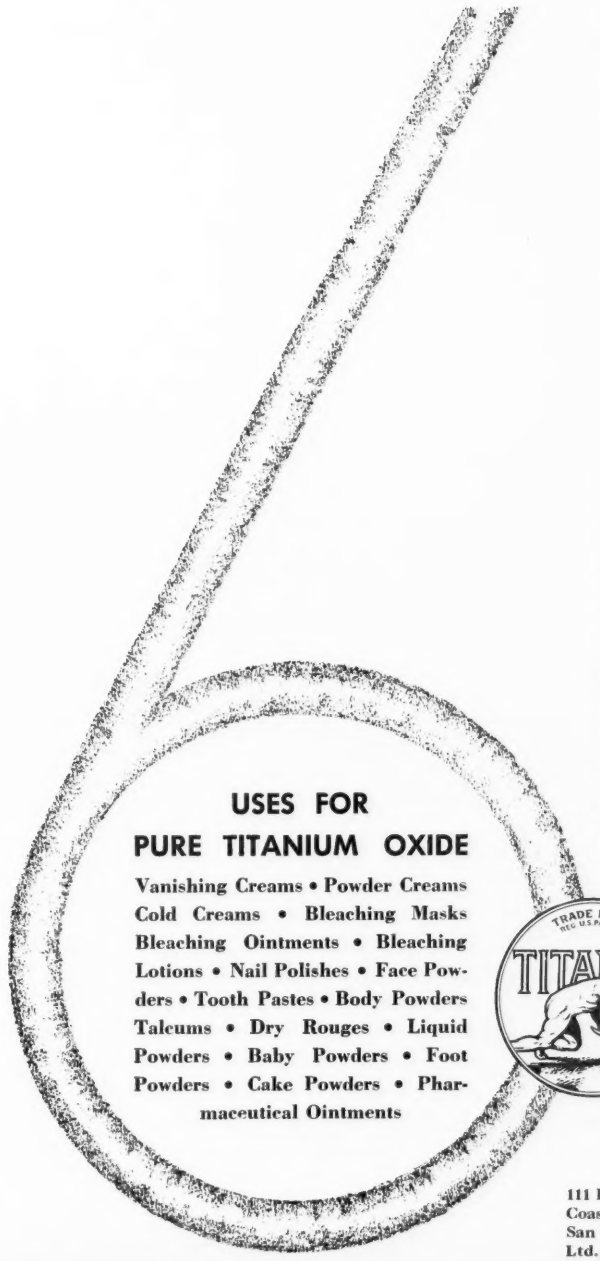
did some water-tasting, the press of the country outdid itself to cover the story, using three columns (with picture) under the caption, "How Does the Water Taste Today." As the country's official water-taster, the Colonel's services are in great demand, but he manages to find some time to spend at his desk in the offices of the Industrial Chemical Sales Co., New York, and some to pass out "Nuchar" tablets to his friends who have not confined their researches to water-tasting.

P. S. Ask the Colonel for reprints of "How Does the Water Taste Today."

Pillet Heads Du Pont Aromatics

Alphonse Pillet has been appointed sales manager for perfume aromatic chemicals in the organic chemical division of E. I. duPont de Nemours & Co., with headquarters at the main office in Wilmington, Del. He has been connected with the duPont interests since the Newport

Quality toilet preparations now use this milder pigment



USES FOR PURE TITANIUM OXIDE

Vanishing Creams • Powder Creams
Cold Creams • Bleaching Masks
Bleaching Ointments • Bleaching
Lotions • Nail Polishes • Face Pow-
ders • Tooth Pastes • Body Powders
Talcums • Dry Rouges • Liquid
Powders • Baby Powders • Foot
Powders • Cake Powders • Phar-
maceutical Ointments

● Pure Titanium Oxide definitely has won a place as an accepted ingredient in high-grade cosmetics. This pure white opaque pigment has the following desirable characteristics: (1) chemical inertness and stability; (2) exceptionally fine and uniform particle size; (3) high neutral whiteness; (4) excellent tinting strength and covering power. ● Properties such as chemical inertness and stability have influenced manufacturers to adopt Pure Titanium Oxide in place of previously used pigments in the preparation of vanishing creams, face powders, compacts, powder bases and other widely used preparations. Pure Titanium Oxide will not react with other ingredients of the formula and cause chemical changes in the product. It will not increase alkalinity or acidity. It is an absolutely harmless inert pigment of high purity and uniformity manufactured under careful laboratory supervision. ● The exceptional brightness and opacity of Pure Titanium Oxide render it valuable for improving the appearance of cosmetic preparations...for masking undesirable shades such as yellowish colors of calcium carbonate in tooth pastes. ● Titanox-B (barium base) is another pigment that has wide application in the cosmetic industry. ● Ask us to send you helpful information on Titanox pigments.

TRADE MARK REG. U.S. PAT. OFF.
TITANOX

TITANOX

TITANIUM PIGMENT COMPANY, INC.

Manufacturers of . . . TITANOX-B (Barium Base)
TITANOX-C (Calcium Base)...PURE TITANIUM OXIDE

111 Broadway, New York, N. Y.; Carondelet Station, St. Louis, Mo.; Pacific Coast Distributor: National Lead Company of California, 2240 24th Street, San Francisco, California; Canadian Distributor: Wilson, Paterson, Gifford, Ltd., 101 Murray Street, Montreal—132 St. Helen's Avenue, Toronto, Ontario.

Chemical Works was taken over in 1931, and prior to that was associated with the Rhodia Chemical Co. as perfume chemist and later as salesman. The company's New York offices are now at 61 Thomas Street.

Alker Resigns

Charles H. Alker Jr. has resigned as secretary and director of Ph. Chaleyer, Inc., New York.

Levis & Boeschenstein Directors

William E. Levis, president of the Owens-Illinois Glass Company, and Harold O. Boeschenstein, vice-president, have been elected directors of the National Distillers Products Corporation.

Abbott Joins Mennen

Frank G. Abbott, who has had direction of the gross profits for McKesson & Robbins, Inc., Bridgeport, Conn., has become associated, in a general sales and management executive position with the Mennen Company, Newark, N. J.

He joined the headquarters personnel of McKesson & Robbins after sales and executive work with the Langley-Michaels Co., which had been affiliated with McKesson & Robbins. Before going to California, he was selling and buying executive for the McKesson-Minneapolis Drug Co. and, earlier, with the Meyer Brothers Drug Co. He was at one time general sales executive for International Proprietaries.

McKesson's Vice-Presidents

The vice-presidents of McKesson & Robbins, Inc., manufacturing and wholesale druggist, Bridgeport, Conn., as a result of the recent reorganization of the official personnel, now are B. H. Badanes, of McKesson & Robbins, Inc.; J. L. Bedsole, of McKesson-Bedsole-Colvin, Inc., Mobile, Ala.; George V. Doerr, of the McKesson-Minneapolis Drug Co., Minneapolis, Minn.; H. B. Faxon, of the McKesson-Faxon Drug Co., Kansas City, Mo.; W. W. Gibson, of the McKesson-Gibson-Snow Co., Albany, N. Y.; B. B. Gilmer, of the McKesson-Southern Drug Co., Houston, Texas; J. H. McGloon, assistant secretary of McKesson & Robbins, Inc., Bridgeport, Conn.; C. F. Michaels, of the McKesson-Langley-Michaels Co., San Francisco; and W. J. Murray, Jr., of the McKesson-Murray Drug Co., Columbia, S. C.

Horn Appointed Abbott Sales Mgr.

Abbott Laboratories, North Chicago, Ill., has announced the appointment of R. E. Horn as General Sales Manager. He has been associated with Abbott Laboratories since 1922 when this firm purchased the Dermatological Research Laboratories of Philadelphia. As sales manager of this subsidiary, he organized and directed an efficient sales force. He was born in Baltimore, Md., November 12, 1886. graduated from the National University, Washington, D. C., with a degree of L. L. M., after which he served as confidential secretary to Hon. Geo. W. Wickersham during his term as Attorney General of the United States, and was for four years Assistant Chief of The Bureau of Investigation, Department of Justice, at Washington. During the War, he had charge of both Military and Naval Intelligence offices in Pittsburgh. Later, he was promoted to the position of Supervising Inspector and Manager of Naval Intelligence at Washington in which capacity he served until the end of the war. At present, he is Lieutenant Commander in the Naval Reserve and President of the Naval Reserve Intelligence Association for the Great Lakes Area. After the War, he was engaged in sales work of a diversified nature until employed by the Dermatological Research Laboratories.

R. E. Horn

H. S. Drake

Harry S. Drake, formerly manager of Abbott's St. Louis office, has been appointed Assistant sales manager. The latter was formerly associated with John T. Milliken & Co., having been made manager of the St. Louis Branch at the time Abbott acquired the Milliken Co. During his term as St. Louis manager, he succeeded in building this branch into one of the most important units of the Abbott organization.

E. F. Gillis, formerly manager of the Drug Trade division, has been appointed manager of the St. Louis branch to succeed Mr. Drake.

The remaining personnel of the Sales Department confirmed by the Board of Directors on April 24th, is as follows: A. D. Brush, Director Sales Research & Planning; F. K. Thayer, Chemical Sales Division; Dr. E. E. Sweebe, Dental and Veterinary Sales; H. K. Young, Quotation and Pricing Section; F. P. Campbell, Traffic Manager; Dr. F. B. Kirby, formerly sales manager, has been appointed Educational Director.

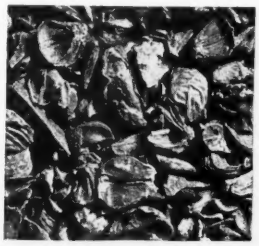
The Dermatological Research Laboratories sales division will be merged with the general sales force of the Abbott Laboratories under the direction of Mr. Horn.

The Sterilac Co., formerly a subsidiary of Abbott Laboratories, has been merged with the parent company.

Mr. Abbott and Mr. Mennen

When buying Quince Seed

You can't trust your eyes



Good?

Bad?

Indifferent?

Tell by Test!

If you buy Quince Seed by the "sight system" you may get your money's worth—*and you may not!* It's a gamble. The only sure way is to *tell by test.* Use the Powell test—a simple method of determining quantity and color of mucilage. We will send details of this test, and samples of our seed for comparison. No obligation, of course.

As producers of the widest range of powdered neutral soaps, we can duplicate or furnish from standard production the exact soap characteristics you require—*at a substantial saving in cost to you.*

Our concentrated shaving cream base eliminates risk of production failures and enables you to produce the finest type of finished shaving cream at low cost.

JOHN POWELL & CO., Inc.

114 East 32nd Street, New York, N. Y.

Tested Quince Seed • Powdered Neutral Soaps • Concentrated Shaving Cream Base

TESTED PERSIAN QUINCE SEED

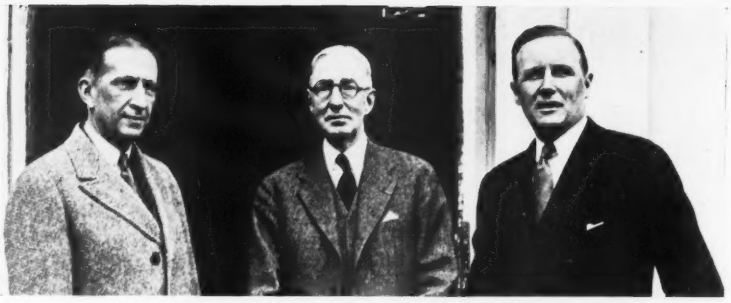
Merck Dedicates Laboratory

Merck & Co., Rahway, N. J., dedicated its new research laboratory, April 25, in the presence of a large, representative gathering of scientific and business executives of the pharmaceutical, medical and chemical fields.

The dedicatory ceremony was held in a large tent adjoining the new building. George W. Merck, president of Merck & Co., welcomed the guests. Addresses were made by Dr. Hugh S. Cumming, Surgeon-General of the United States Public Health Service; Lammot du Pont, president of E. I. du Pont de Nemours & Co. and of the Manufacturing Chemists' Association; and Josiah K. Lilly, chairman of the board of Eli Lilly & Co. and a former president of the American Drug Manufacturers' Association. The dedicatory address was given by Sir Henry H. Dale, C.B.E., M.D., F.R.S., director of the National Institute of Medical Research, England, whose subject was "The Relation of Research in Universities to Research Supported by Industry."

Sir Henry H. Dale

At the close of the ceremony, the guests were conducted on a tour of inspection through the new laboratory and tea was served at an informal reception in the library.



Lammot Du Pont, Hugh S. Cummings and George W. Merck

Norwich Gets Injunction

Norwich Pharmacal Co. has been granted an injunction in the United States District Court, District of New Jersey, against the Spaulding Products Co., Newark, New Jersey, perpetually enjoining it from using the name "Unguentam" or any similar name in conflict with "Unguentine."

In the final decree it was adjudged by the court that since the year 1893 The Norwich Pharmacal Company has been continuously vested with the exclusive right and title to the trade-mark "Unguentine" as a trade-mark for an antiseptic surgical dressing for treating cuts, burns, bruises, chilblains and sunburn, and that the same is duly registered in the patent office. The defendant for several years had used the word "Unguentam" on a preparation which was declared by the court to be sufficiently related as to use and descriptive properties to Unguentine as to require injunctive relief against infringement of the plaintiff's exclusive right to the use of the word "Unguentine."

Nat. Adhesives Builds

National Adhesives Corp., New York, has announced the erection of a new building adjoining the company's factory at Dunellen, N. J., designed exclusively for the manufacture of adhesive for transparent papers.

On Five-Day Week

Heyden Chemical Corp., New York, Hoffmann-La Roche, Inc., Nutley, N. J., and Merck & Co., Rahway, N. J., are the most recent of the companies in this industry to place their plant and office operations on the basis of a five-day week.

Hollywood Labs. New Branch

Hollywood Laboratories, Toronto, Canada, has established a branch factory in New York and plans to manufacture its line in this country. H. D. Wintrob was recently in New York conducting negotiations with chain stores to handle the initial item to be introduced in this country—a perfume.

Bone Glue

Epidos, Paris, France, has announced an international competition in research to develop new uses of bone glue.

Will & Baumer Acquires Bowdlear

Will & Baumer Candle Co., Inc., Syracuse, has announced the acquisition of the W. H. Bowdlear Co., Boston.

Synthetic Molded Products

Synthetic Moulded Products, Inc., has announced the opening of its new plant at Stonington, Conn. The company is a moulder of jars, caps, containers, display stands, etc. O. W. Greene, Jr.

Vadsco's N. Y. Office

Vadsco Sales Corp. has moved a part of its office force from Long Island City to new offices at 580 Fifth Avenue, New York.

Lawrence-Williams Appoints Ritchie

Lawrence-Williams Co., Cleveland, has appointed Harold F. Ritchie & Co., New York, as its exclusive sales agent for the United States. Following the completion of long litigation about trade-marks for caustic balsam, the Lawrence-Williams Co. now calls its product "Lawrence Caustic Balsam."

Six Cents Damages

Mary Garden, suing in the New York Supreme Court, has succeeded in restraining Rigaud Parfumeur-Paris, New York, from using her name on its line of cosmetics.

The firm's right to the use of the name was obtained through Miss Garden's agent 20 years ago. The court held that the permission could be revoked and awarded the singer six cents damages.

Owens Expands

The Owens-Illinois Glass Co. has bought the entire assets and business of the Hemingray Glass Co., Muncie, Ind., manufacturer of glass insulators, and also substantially all the assets of the O'Neill Machine Co., Toledo.

In April, Owens-Illinois acquired a substantial majority of the preferred stock of the Container Corporation of America and about the same time also acquired about 10,000 shares of the common stock of the National Distillers Products Corp.

Pinaud's New Officers

Pinaud, Inc., New York, has elected the following officers: president, Jacques Heilbronn, succeeding George Klotz; vice-president, Marcel Michelin, succeeding John J. Quinn; treasurer, George Panopulo; secretary, Bernard Knollenberg.

Youthmist Co.

Youthmist Co. has been organized in New York to engage in the cosmetic business. L. W. Groves is general manager.

J. Franks' New Company

J. Franks Manufacturing Co., Brooklyn, has been organized by Joseph Franks to manufacture set up paper boxes. The company is a reorganization of the former Du-Frank Corp., also of Brooklyn.

IT'S A FUNNY THING!

Investigation has disclosed the fact that some dentifrice manufacturers have not actually checked the raw products, particularly chalk, which go to make up Tooth Paste for many months and sometimes even years. They buy a brand and assume they are getting materials which meet their requirements because they once did, and don't take the trouble to check them. They accept CHALK on faith. Do you?

As manufacturers of SNOW TOP Brand of Precipitated Chalk we welcome constant checking, secure in the knowledge that month after month, all shipments will be uniform to your specifications in:

Color — *Freedom from Grit*
Purity — *Adsorptive Properties*
Cleanliness — *Binding Power*
Physical Characteristics

SNOW TOP CHALK is made in America---snow white, grit free---by American machinery and workmen. By the way, don't lose a moment's sleep about how sufficient the supply because our plant is big enough to supply our present customers and also take over all the chalk orders which reach our shores from abroad---and then some.

INDUSTRIAL CHEMICAL SALES COMPANY, INC.

230 Park Avenue, New York — **205 W. Wacker Drive, Chicago**

SNOW TOP

PRECIPITATED CHALK

CRETA PRÆCIP U. S. P.

Abbott in Canada

Abbott Laboratories, Limited, Montreal, Canada, has elected the following officers and directors: S. DeWitt Clough, President, to succeed Dr. A. S. Burdick, recently deceased, R. M. Cain, vice-president, F. J. Laverty, secretary, and B. R. deMassy, general manager. The following directors were elected: S. DeWitt Clough, R. M. Cain, James F. Stiles, Jr., B. R. deMassy, and F. J. Laverty.

Chiris Appoints De Lamar

Antoine Chiris Co., New York, has announced the appointment of J. H. DeLamar as Chicago representative. W. W. De Frees, vice-president of the company, who has been in charge of the Chicago office and territory, will be located in New York in the future.

D. & O. Honors Vreeland

Dodge & Olcott Co., New York, had a family gathering on May 1st in honor of its oldest employee, Lewis Vreeland, who has been associated with it continuously for 60 years. He first came in 1873 and was given charge of the oil room of the old firm of Dodge & Olcott shortly after he was employed. The employees presented him with a silver platter while the house itself presented him with a very substantial check. A complimentary address was made by the president, F. T. Dodge, who has known Mr. Vreeland for 28 years. The firm has many old time employees, several now having passed the 50 year mark and many very close to it.

Auburn Button Acquires Allen & Hills

Auburn Button Works, Inc., Auburn, N. Y., molder, has taken over the business of Allen & Hills, Inc.

Squibb Adex Tablets

E. R. Squibb & Sons, New York, has issued the following announcement: "In March 1931, International Vitamin Corporation entered suit against us, charging that a process which we were then using for extracting vitamins from cod liver oil infringed its Marcus patent.

"We contested the suit but at the time when the lower court decided against us in June, 1932, our research laboratories had perfected a new and improved process which enabled us to immediately discontinue the old process. This new process by the decision of the court clearly and entirely avoids the Marcus patent.

"Therefore, the recent decision of the Court of Appeals, affirming the decision of the lower court, does not affect in any way the commercial or legal situation as to Squibb Adex Tablets which contain a concentrate of Cod and Halibut Liver Oils now on the market. We shall continue to make and sell these tablets.

"Consequently, our dealers are not liable under the Marcus patent, either because of past or of future sales of our product, and we guarantee to protect them against any charge of infringement of that patent based on the sale of our products."

Yardley to Rockefeller Center

Yardley & Co., Ltd., New York, has leased space for offices and showrooms on the ground floor and second floor of the British Empire Building, Rockefeller Center, that city. The contracts run for ten years from June 1.

New Orleans Chemical

New Orleans Chemical Co., New Orleans, has begun the manufacture of "Sacco" brand shaving cream and other cosmetics. Officers are president, H. T. Underwood; vice-president, E. G. Dufour; secretary-treasurer, A. Murphy.

New Drug Section Members

Aschenbach & Miller, Inc., represented by John F. Belsterling; the Anglo-French Drug Company, American Aniline Products, Inc., the Pro-phy-lac-tic Brush Company, and F. F. Hillis & Co., are among new companies elected to membership in the drug and chemical section, New York Board of Trade.

Abbott's New Catalog

A new catalog and price-list of the combined Abbott, D-R-L, Swan-Myers specialties has recently been mailed to every physician and hospital in the United States by Abbott Laboratories, North Chicago.

Many new and important research products such as "Haliver Oil," "Haliver Malt," "Cofron Elixir" and "Cofron-Maltose" appear for the first time in this edition. The information is profusely illustrated with excellent reproductions of the new, standardized style of packages.

New Products

"JUNIS" BY PEPSODENT

Pepsodent Co., Chicago, is planning to introduce a new product, a facial cream, under the name, "Junis."

MOSBY'S ANTISEPTIC

Gilbert Mosby, Cincinnati, founder of "Konjola," has returned from retirement to introduce a new product, "Mosby's A to Z Antiseptic."

"TAK"

Tak, Inc., Newark, N. J., has introduced a new hand conditioner under the name, "Tak."

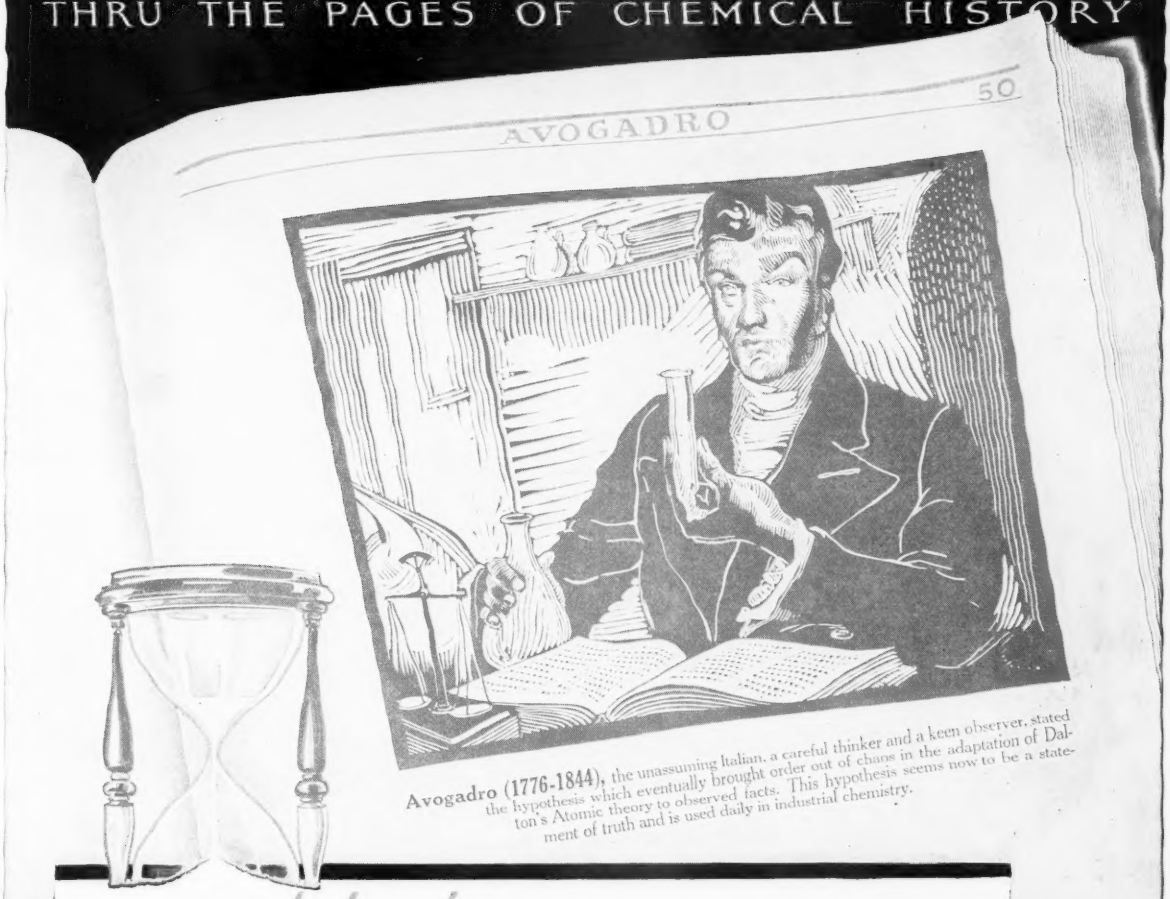
At Century of Progress

Among those who will exhibit at the Century of Progress Exposition are: E. R. Squibb & Sons—Medieval apothecary, an ancient apothecary shop; modern medicines; Mallinckrodt Chemical Works—The history of ether; Gerber Products Co.—The history of foods; Burroughs & Wellcome—The chemical products of Great Britain; Hynson, Westcott & Co.—The story of antiseptics; W. E. Long Co.—Diabetic foods; Ritter Dental Mfg. Co.—The growth and development of dental hygiene; S. S. White Dental Mfg. Co.—Motion picture films showing how to care for the teeth; Chappel Bros. Inc.—Liver extracts for anaemia; Chicago Pharmacal Co.—Pharmaceutical products; The Walgreen Co. two modern drug stores.

Squibb's Apothecary at Century of Progress

LEADERSHIP

THRU THE PAGES OF CHEMICAL HISTORY



Avogadro (1776-1844), the unassuming Italian, a careful thinker and a keen observer, stated the hypothesis which eventually brought order out of chaos in the adaptation of Dalton's Atomic theory to observed facts. This hypothesis seems now to be a statement of truth and is used daily in industrial chemistry.

and to-day

MONSANTO

emphasizes a broad policy of continuous modern research to pave the way to new developments and improvements. In the pharmaceutical group, outstanding Monsanto products include:

Acetphenetidin U. S. P.
Phenolphthalein U. S. P.
and a complete line of Salicylates

Your selection of Monsanto basic materials is the first step toward ultimate satisfaction.

Monsanto Chemical Works
ST. LOUIS, U.S.A.

NEW YORK BOSTON CHICAGO SAN FRANCISCO LONDON

CHEMICALS of QUALITY
Monsanto
ST. LOUIS, U.S.A.

These pure clean crystals of CITRIC ACID

The Gold Medal Standard Citric Acid has never been excelled... Citric Acid occurs naturally in fruits—the lemon, strawberry, pineapple, orange, raspberry and many others. It is used universally by bottlers and confectioners, and also by steel and textile mills... In Medicine it is the basis of a number of well known remedies... New uses are encouraged, with prices for Merck's Gold Medal Standard Citric Acid lowest in history... Consult with our technical staff... Supplied in the following forms: Crystal, Granular, Powder and Anhydrous Powder.

MERCK & CO. INC.

Manufacturing Chemists

Rahway, N. J.

161 Sixth Avenue	916 Parrish Street	4528 S. Broadway	MERCK & CO. LTD.
New York	Philadelphia	St. Louis	Montreal

Graphically and entertainingly the story of the House of Merck and its activities and services will be revealed in our exhibit, adjacent to the northernmost entrance from the Court of Honor, in the Hall of Science building.

You are cordially invited.

Removals

ABBOTT LABS. IN LOS ANGELES

Abbott Laboratories, North Chicago, has announced the removal of its Los Angeles branch to new and larger quarters at 443 So. San Pedro St., that city. Officials of the company stated that this removal was necessitated by an increase in business coming to that branch.

P. BEIERSDORF & CO.

P. Beiersdorf & Co., Inc., manufacturer of "Nivea," and Duke Laboratories, both managed by Dr. Carl J. Herzog, have moved to larger quarters at 46-10 11th st., Long Island City, N. Y.

COMPAGNIE DUVAL

Compagnie Duval, New York, has announced its removal to 125 E. 24 st., that city.

JUNGMANN & CO.

Jungmann & Co., New York, has moved to 157 Chambers st., that city.

MARINELLO CO.

Marinello Co., New York, has announced the removal of its plant and those of its affiliated companies to Hoboken, N. J. Executive offices and laboratory have been transferred to 33W. 46 st., New York, where offices of Inecto, Inc., and Zotos Corp. have been located for some time.

NEW ENG. COL. TUBE

New England Collapsible Tube Co. has moved its New York offices to 500 Fifth ave., that city. Telephone—PEnnsylvania 6-9359.

SCHLIEMANN COMPANIES

Schliemann Companies, Inc., New York, has announced its removal to new and larger quarters at 233 Broadway, that city.

FOSTER D. SNELL

Foster D. Snell, Inc., has moved to 305 Washington Street, Brooklyn, N. Y., where larger quarters have been provided for both its offices and laboratories.

At the new address the ninth floor has been remodelled to give a well integrated laboratory with suitable units for research, microscopy, library, apparatus and chemical storage, industrial development, pilot-plant work, testing and analysis. The executive offices are on the sixth floor of the same building.

STEIN-BRILL & GEO. RODGERS

Stein-Brill Corp., machinery, has moved its offices and warehouses to 183 Varick St., New York. This company has leased over 20,000 feet for the incorporation of warehouse and offices under one roof.

The former warehouses of the company located in Jersey City will be continued in conjunction with the new warehouse until such time as most of the machinery has been moved to the new premises.

George G. Rodgers Co., an associated company, manufacturer of filling and mixing machinery, will also be located at the same address.

ZALA PERFUMERY

Zala Perfumery Co., Philadelphia, has announced its removal to a new modern factory located at 2030 E. Willard st., that city. The company is best known for its "Olivo" line. In 1930 it also acquired the Grecian Chemical Co., also of Philadelphia, manufacturer of drugs and cosmetics. D. Caimi is president of the combined establishments and E. R. Daniels, formerly of the Herpicide Co., is district manager for the middle west and Pacific coast.

F. J. Pope Honored

Frederick J. Pope, president of "Toilet Requisites" was honored at a large reception May 11. The occasion was in honor honor of Mr. Pope's birthday, the seventeenth anniversary of "Toilet Requisites," and the official housewarming for the

F. J. Pope

organization's new home in Rockefeller Center, New York. The reception was an outstanding success and the hospitality of Mr. Pope and his associates was enjoyed by representatives of every branch of the cosmetic field including manufacturers, department store buyers, beauty editors and feature writers, and sales and advertising men.

It is Mr. Pope's hope to make Rockefeller Center the cosmetic and perfume center of the country and his ideas in this direction received enthusiastic support at this reception in his honor.

Institute of Medicine Mfrs.

The Institute of Medicine Manufacturers, Inc., has made public announcement of its formation in 1931 with the following officers: president, Dwight E. Austin, president, Thomas Leeming & Co., New York; vice-president, Jerry McQuade, Topics Publishing Co., New York; treasurer, T. S. Strong, president, Strong-Cobb Co., Cleveland; secretary, Wm. P. Jacobs, president, Jacobs Religious List, Clinton, S. C. Counsel for the organization in the firm of Davies, Jones, Beebe and Busick, Washington, D. C.

According to this first official news release, the program of the group is as follows:

"Though the ultimate purpose of the Institute of Medicine Manufacturers is that of bringing the public to understand the truth about reputable package medicines, the Institute has found itself faced with an immediate problem in Washington which overshadows its other activities and requires most of its attention.

"The Institute and its supporters all thoroughly agree that the Industry is in need of a degree of Federal regulations and have been in thorough accord with those activities of the Food and Drug Administration and the Federal Trade Commission which are designed to protect the public against unsound and dangerous package medicines. However, it is realized that at best the laws establishing and operating these Federal agencies are very indefinite and subject to arbitrary interpretations which might and sometimes do work serious harm to the many highly honored and thoroughly reputable manufacturers in the field."

Through a systematic study of cases involving dispute between the manufacturer and government departments, "the Institute of Medicine Manufacturers has sought to clarify the laws affecting the industry. It has confined its attention to those cases involving principles which are of general interest to the industry at large."

The statement adds that "the work of the Institute should not be confused with that of the several excellent trade associations within the industry. Their purposes and modes of operation are not only entirely separate but also entirely different. The Institute is primarily only interested in principles, in interpretation of laws and in building the confidence of the press and the public. It is doing a type of work which is not usually expected of a trade association. It is a type of work which the usual trade association should not and could not attempt. The supporters of the Institute are prominent members of the several leading trade associations, mostly manufacturers of package medicines. Where their paths have crossed, the Institute has always striven to work with and uphold the dignity of the several leading trade associations."

The Institute maintains general headquarters at 551 Fifth Ave., New York.

Industry's Stocks Up

Prices of common stocks of companies in the drug and cosmetics industry have moved upwards some 34 per cent. since the low point of the year March 1, but they have not moved as fast as stocks of some of the more depressed industries nor as fast as the general list, according to the Standard Statistics Co., New York. A comparison over recent weeks of the drug and cosmetics index with that for 351 miscellaneous industrials follows:

1933	(1926 average equals 100) Drugs and Cosmetics	351 Industrials
April 5	55.4	42.3
12	58.1	45.2
19	65.6	51.6
26	69.4	56.0
May 3	72.5	60.0
1933 High	72.5	60.0
Low	53.9	38.7
1932 High	88.3	61.6
Low	45.0	31.9

Monsanto Buys Swann Control

Monsanto Chemical Works, has acquired a controlling equity in the majority of the voting stock of the Swann Corp. of Birmingham. The Swann Corporation's gross assets total approximately five million dollars. Through its subsidiaries, the Provident Chemical Co. of St. Louis, the Swann Chemical Co., of Birmhigham, and Wilckes, Martin, Wilckes, Co. of Camden, New Jersey, it owns and operates plants located in St. Louis, Missouri; Anniston, Alabama; and Camden, New Jersey. The Swann Corporation's capitalization consists of 508,839 no par value shares. Of this amount, 300,000 are Class B voting stock and 208,839 Class A non-voting. There is also outstanding $755,700 6% preferred stock of the Swann Corporation's subsidiaries.

The following eight officers of the Monsanto Chemical Works have been elected to the board of directors of The Swann Corporation: Edgar M. Queeny, Charles Belknap, Gaston Du Bois, Theodore Rassieur, J. A. Berninghaus, J. W. Livingston, F. A. Ulmer, G. Lee Camp, and the following directors of the old Board were re-elected: Oscar Wells, Chairman of the First National Bank of Birmingham; William H. Weatherly, Chairman of the First National Bank of Anniston; Ferdinand Wilckes of Camden, New Jersey; William H. Hassinger, Lindley C. Morton, Theodore Swann and C. M. Jesperson of Birmingham. Theodore Swann was re-elected president.

This most recent addition to Monsanto's activities follows its acquisition in 1928 of the complete ownership of its British subsidiary, now known as Monsanto Chemical Works, Ltd., and in 1929 its acquisition of Rubber Service Laboratories, Commonwealth Chemical Co. and the Merrimac Chemical Co.

The cash payment by Monsanto for the controlling equity in the Swann Corporation was indicated in the recently issued Monsanto quarterly statement as having been $467,000. This statement reported for quarter ended March 31, 1933, net profit for $296,920 after charges, depreciation, Federal taxes, etc., equivalent to 69c a share on 427,166 no par shares of capital stock. This compares with $275,859, or 64c a share on 429,000 shares in first quarter of 1932.

Current assets as of March 31, 1933, including $1,984,961 cash and marketable securities, amounted to $5,897,007 and current liabilities were $1,049,981. This compares with cash and marketable securities of $2,111,844, current assets of $6,002,937 and current liabilities of $967,688 on March 31, of previous year. Earned surplus amounted to $3,162,783, against $2,795,557, and capital surplus was $2,368,202 compared with $4,122,279 on March 31, 1932.

Merck Retires Bonds

Merck & Co., Inc., has anticipated its first mortgage bonds to the extent of $300,000., thus eliminating the total outstanding bonded indebtedness. The original First Mortgage 6% Serial Gold Bonds authorized and issued in 1927 amounted to $2,700,000., and the final maturity date was 1936.

The following officers have been elected: chairman of the board, Frederic Rosengarten; president, George W. Merck; vice-president and treasurer, George W. Perkins; vice-presidents, J. H. Ambler, R. E. Gruber, James J. Kerrigan, Joseph Rosin; secretary, Oscar R. Ewing; assistant secretaries, P. McK. Garrison, S. W. Walker, H. R. Neilson; assistant treasurer, H. Stein.

At the request of Mr. Joseph G. Rosengarten, Jr. his resignation as vice-president was regretfully accepted by the board of directors.

Liggett Files Schedule

Louis K. Liggett Co., filed May 2 a schedule of assets and liabilities in the Federal district court, New York, in connection with its recent petition in bankruptcy. The schedule contained 635 typewritten pages, showing liabilities of $8,616,355 and assets of $8,694,181. Among the liabilities is an item of $3,418,840 representing the company's endorsement of a gold bond issue of Liggett Buildings, Inc. Claims of $2,609,697 and $894,684 alleged to be due the company from the Liggett Drug Stores, Inc., and the Owl Drug Co., respectively, were not listed in the assets, both of those companies being in bankruptcy also.

Smith Brothers Reduces Stock

Smith Brothers, Inc., Poughkeepsie, N. Y., has reduced the amount of its capital stock to $1,000,000 from $1,250,000, according to a certificate filed at Albany with the Secretary of State of New York.

New United Drug Directors

United Drug Co., Boston has elected the following new directors: W. E. Weiss, general manager of Sterling Products, Inc.; Henry Bristol, of Bristol-Myers Co.; Smith Richardson, president of the Vick Chemical Co., and E. J. Griffing, vice-president in charge of sales who replaces Dan M. Chambers.

Earnings and Dividends

AFFILIATED PRODUCTS

Affiliated Products, Inc., and subsidiaries reports for quarter ended March 31: Net income after Federal taxes and other charges, $160,863, equal to 42 cents a share on 382,800 no-par capital shares, against $155,562, or 40 cents a share, in first quarter last year.

ANCHOR CAP

Anchor Cap Corp. reports for quarter ended March 31: Net income after depreciation, expenses, amoritization, provision for Canadian exchange fluctuations, taxes and other charges, $56,749, equivalent, after preferred dividend requirements, to two cents a share on 230,758 no par common shares, compared with $89,085 or 16 cents a share on 227,426 common shares last year. Depreciation of $8,431 and amortization of $2,578 accrued on assets of which it is proposed to reduce the book value, were not included as deductions for the last quarter.

BOOTS DRUG

Boots Pure Drug Co., Ltd., reports for year ended March 21: Profit after charges, £701,453, compared with £731,890 in preceding fiscal year.

COTY

The report of Coty, Inc., and its subsidiaries in this country shows for 1932 a net income of $521,386, after deductions for depreciation, inventory reserve, Federal taxes and other charges. The proportion of profits and losses of foreign subsidiary and associated companies for the year applicable to holdings of Coty in these companies amounted to a net loss of $151,585, including approximate taxes on proportionate profits.

For the year ended Dec. 31, 1931, net income, including $166,436 dividends received from foreign subsidiaries and associated companies, was $991,721, after depreciation and Federal taxes. In that year the proportion of profits and losses of foreign subsidiary and associated companies applicable to holdings of Coty in these companies amounted to a net loss of $424,424, including approximate taxes on proportionate profits.

Current assets, as of Dec. 21 last, including $1,457,511 cash and marketable securities at market value, amounted to $3,750,609, and current liabilities, including $200,000 reserve for contingencies, were $396,549. This compared with cash and marketable securities at market value of $1,522,127 ,current assets of $4,495,881 and current liabilities of $371,002 on Dec. 31 of previous year.

DOW CHEMICAL

Dow Chemical Co. has declared dividends as follows payable May 15 to stock-

HEYDEN
FINE CHEMICALS

BENZOATES

Benzoate Soda — Benzoic Acid
Benzaldehyde — Benzyl Chloride

SALICYLATES

Acid Salicylic — Sodium Salicylate
Acetyl Salicylic Acid
Methyl Salicylate — Minor Salicylates

Formaldehyde — Creosote
Para Formaldehyde — Creosote Carbonate
Hexamethylenetetramine — Guaiacol
Bromides — Silver Salts
Glycerophosphates
Calcium Guaiacol Sulphonate
Potassium Guaiacol Sulphonate

HEYDEN CHEMICAL CORPORATION
50 UNION SQUARE NEW YORK

180 North Wacker Drive Chicago, Ill.

Factories:

Garfield, N. J. Perth Amboy, N. J.

holders of record at the close of business May 1, 1933: preferred stock, 1¾%; non-par value stock, 50c per share.

DU PONT

E. I. du Pont de Nemours & Co. reports for the first quarter of 1933 a net income of $5,480,515, equivalent, after dividends on the debenture stock, to 35 cents a share on 10,871,977 shares, the average number outstanding in the period. This compares with a net income of $9,689,433 in the corresponding period of 1932, equivalent to 74 cents a share on 10,943,767 shares.

"Income from operations for the first quarter of 1933," the company announced, "after provision for depreciation and obsolescence of plants and equipment, was $2,369,570, compared with $3,861,128 for the same period in 1932. Income from investments was $3,377,766, including $2,499,362 income from General Motors investment. For the first quarter of 1932 income from investments was $6,251,910, of which $4,989,333 was from General Motors investment.

LAMBERT CO.

Lambert Co. reports for quarter ended March 31: Net profit after taxes and other charges, $818,029, equal to $1.09 a share on 748,996 no-par capital shares, compared with $1,420,685, or $1.90 a share, in corresponding quarter a year ago.

LEHN & FINK

Lehn & Fink Products Co., reports for quarter ended March 31: Net profit after depreciation, Federal taxes and other charges, $117,977, equal to 28 cents a share on 408,966 capital shares, excluding stock in treasury.

NAUHEIM PHARMACIES

The Nauheim Pharmacies, Inc., reported a net loss of $64,127 for the year 1932 after taxes ,depreciation, amortization and other charges . This compares with a loss of $121,494 in 1931. A loss of $100,145 on sale of capital assets and on cancellation or expiration of leases and a $35,925 write-off on notes receivable relating to sale of capital assets were carried to deficit account in 1932. This company was petitioned into bankruptcy April 9 with liabilities reported at $275,347 and assets of $304,945, the main item of which was listed as stock with a book value of $247,712, which was subject to liens for unpaid rent.

OWENS-ILLINOIS

Owens Illinois Glass Co. reports for twelve months ended March 31: Net income after depreciation, interest, Federal taxes and other charges, $2,466,008, equivalent, after six per cent. preferred dividends ,to $2.02 a share on 977,173 $25 par common shares, against $2,508,276 or $2.20 a share on 922,173 common shares for twelve months ended March 31, 1932.

PEOPLES DRUG

Peoples Drug Stores, Inc. reports for quarter ended March 31: Net profit after depreciation, Federal taxes and other charges, $105,281, equivalent after 6½% preferred dividend payments, to 59 cents a share on 119,937 no-par common shares, excluding stock in treasury. This compares with $101,493, or 52 cents a share on 122,737 common shares, in same quarter last year.

MILLER WHOLESALE DRUG

Miller Wholesale Drug reports for 1932: Net loss after expenses, taxes, interest and other charges, $36,745, compared with $12,837, or 34 cents a share on 37,500 capital shares, in 1931.

E. R. SQUIBB

For the year ended December 31, 1932, E. R. Squibb & Sons have reported a net profit of $1,236,457, after depreciation, Federal taxes and other charges. This was equal to $2 a share on 450,949 no-par common shares, after $6 preferred dividends. It compared with a net profit of $1,651,234, or $2.92 a share on 450,785 common shares in 1931.

Current assets as of December 31, 1932, amounted to $7,329,950 and current liabilities were $977,150, comparing with $6,963,676 and $1,112,296, respectively, at end of preceding year. Cash on hand was $2,031,759 and earned surplus was $4,997,221 ,against $1,462,702 and $4,703,232, respectively, at close of 1931.

VADSCO SALES

Vadsco Sales Corp. reports for quarter ended March 31: Net loss after taxes, depreciation and other charges, $76,382, contrasted with net profit of $83,114, equal to $1.65 a share on 90,194 7 per cent. preferred shares, in first quarter of 1932.

WALGREEN CO.

Walgreen Co. reports net earnings of $522,152 for the six months ended on March 31, against $787,546 in the corresponding period of the preceding year. The earnings are equivalent to 51 cents a share on the common stock, against 78 cents. Current assets on March 31 were $7,490,757 and current liabilities $2,091,691.

Associations

N. W. D. A. Joint Meeting

National Wholesale Druggists' Association held a joint meeting with manufacturers in St. Louis, April 28, as part of a three-day meeting in that city April 26 to 28. Most of the three-day session was given over to sectional meetings and a meeting of the board of control of this association of which Carl F. G. Meyer is president and E. L. Newcomb, secretary.

The joint meeting with manufacturers was largely given over to a discussion of efforts to stabilize distribution. Stabilization policies were outlined and the need for cooperative action to maintain the drug business upon an economically sound basis were stressed. Grocery trade distribution of drug products and private brand merchandise were both alluded to as important points at issue in this situation.

Among the wholesalers who spoke were H. D. Faxon, J. M. Penland, C. F. G. Meyer and Barret Moxley. Among the manufacturers' representatives discussing the matter were Earl Means, Bristol-Myers Co.; Earl Cone, S. S. S. Co.; James J. Kerrigan, Merck & Co.; Harold W. Simpkins, Mallinckrodt Chemical Works; Thomas Hicks, Johnson & Johnson; E. V. Zink, Eli Lilly & Co.; Ray B. Whidden, Bauer & Black; Jack Norton, of Lambert Co.

Wholesalers and manufacturers were entertained at an informal dinner, April 27, by the Paris Medicine Co. Harry Goldsmith was the company's representative as host.

Another informal dinner was given April 28 by the Lambert Co., Jack Norton presided, and talks were given by C. F. G. Meyer, H. D. Faxon, and E. L. Newcomb.

Insecticide & Disinfectant Convention

The nineteenth annual mid-year meeting of the National Association of Insecticide and Disinfectant Manufacturers will be held on Monday and Tuesday, June 5 and 6 at the Edgewater Beach Hotel, Chicago. The regular sessions will be preceded by a meeting of the Board of Governors in Chicago on Sunday evening, June 4, at 7.00 P. M. There will be a program of entertainment, including a golf tournament and horseback riding, on June 4 prior to the meeting and a trip through the Century of Progress by bus on June 7, following the convention. Business sessions will be held morning and afternoon on June 5 and 6, with group luncheons on each day. The mid-year banquet, which this time will be in the form of a beef steak dinner with a more elaborate floor show than heretofore, will close the meeting on Tuesday evening, June 6. Preceding the dinner, there will be a reception in the Lincoln Room of the Edgewater Beach Hotel at 6.30 P. M.

The convention will be in charge of Walter J. Andree of Sinclair Refining Co., New York, chairman of the Convention Committee, assisted on arrangements by John Powell of John Powell & Co., Harry W. Cole of Baird & McGuire, Inc., and J. A. Walsh of C. B. Dolge Co. Entertainment and the banquet will be in charge of Grant A. Dorland of the MacNair-Dorland Co. General registration, covering a "round trip ticket" for luncheons and banquet will be reduced to ten dollars per person this year.

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by the Exchange Lemon Products Company of Corona, California. Backed by the Sunkist group of 13,200 citrus growers—largest in the world. Immediate shipments from warehouse stocks in New York, Chicago, Philadelphia and St. Louis. For prices on kegs, barrels or carloads, consult any of the following distributors:

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Brooklyn, New York

SWANN CHEMICAL COMPANY, Birmingham, Alabama

THE HARSHAW CHEMICAL COMPANY, Cleveland, Ohio

PACIFIC COAST SERVED BY

Products Department - CALIFORNIA FRUIT GROWERS EXCHANGE, Ontario, California

N. Y. Board of Trade

The drug, chemical and allied trades section of the New York Board of Trade, Inc., has just completed a digest of the new retail sales tax which will be imposed upon receipts from the sale of tangible personal property on May 1. The report which is entitled "Legislative Bulletin No. 1 is the beginning of a service which has been started with the idea of informing members of the section of various legislative measures effecting the chemical and drug industry.

The section also proposed the adoption of the following resolution by the entire body:

BE IT RESOLVED, that the New York Board of Trade, Inc., request the Secretary of Agriculture, after exploring the various points at issue, to present any contemplated changes in the Pure Food and Drugs Act for a review by the drug and pharmaceutical profession, so that legislation proposed by either the President or Congress will benefit by these years of extensive industrial research and scientific knowledge, and

BE IT FURTHER RESOLVED, that copies of this report and resolution be sent to the President of the United States, the Secretary of the Treasury, Secretary of Commerce and Secretary of Agriculture.

United Medicine Mfrs. Meeting

The United Medicine Manufacturers of America will hold its annual convention in *Chicago, September 10-12.*

Bush Representative

Frank C. Walsh, who was recently appointed by W. J. Bush & Co., Inc., New York, to represent them in the Chicago territory.

A. M. A. *Rejects*

THIO-ALBIN

Thio-Albin, manufactured by *Thio*phene Laboratories, Inc., Chicago, because it is marketed with claims that are not supported by acceptable evidence and under a name that is not descriptive of its composition.

LUMODRIN

Lumodrin, manufactured by the Winthrop Chemical Co., New York, because it is an unscientific mixture containing an excessive number of active ingredients; and because it is marketed with unwarranted and extravagant therapeutic claims, under an uninforming and misleading name.

OMNADIN

Omnadin, manufactured by H. A. Metz Laboratories, Inc., because it is an unscientific preparation of semisecret composition, marketed with unwarranted and extravagant therapeutic claims under an uninformative name.

Obituaries

George Lueders

George Lueders, chairman of the board, George Lueders & Co., New York, essential oils, died at his home in Summit, N. J., May 4, aged 76. He was one of the

pioneers in the essential oils business in *this country.*

He was born in Leipsig, Germany, *February 4, 1857 and quite early in life* entered the employment of Lautier Fils, *Grasse. After a thorough experience in* the factory, he became a salesman for the *house, taking his first order October 4,* 1878. In September 1885 he opened offices and warehouse in New York and began to act as United States agent for *Lautier Fils and other European houses.* Expansion in the firm's activities lead him to form a partnership in 1892, when he was joined by Ferdinand Weber and Henry Heister. In 1906, the partnership became a corporation with Mr. Lueders as president, an office he held until 1931 when he became chairman of the board.

He married Clotolde Kurtz in 1887 and the widow and three children survive him. They are Mrs. H. M. Paulsen, George K. Lueders and Frederick J. Lueders. The latter is assistant secretary of the company and the other son is connected with the company's sales organization.

He was a charter member of the Bankers' Club, and one of the oldest members of the City Mid-Day Club and the Baltusrol Golf Club, Short Hills, N. J.

William H. Snyder

William H. Snyder, of Whittaker, Clark & Daniels, Inc., New York, died from heart disease, May 1, at his home in Maplewood, N. J. He was thirty-two years old and a son-in-law of S. H. Clark, president of the company. He was a member of the Masonic order, Junior Order of Mechanics, and the Royal Arcanum. His wife, one son, three daughters, a brother, and three sisters survive.

Arthur W. Kretschmar

Arthur W. Kretschmar, head of the pharmaceutical importing company bearing his name at 396 Broadway, New York, died on April 19, his fiftieth birthday, in the Manhattan General Hospital, that city.

Charles H. Ridgely

Charles H. Ridgely, founder of the Caldwell Syrup of Pepsin Company, Monticello, Ill., died unexpectedly in his home in Decautur, Ill., on April 16. He was seventy-two years old and a native of Santagomon township. Piatt county, Ill.

William G. Stebbins

William G. Stebbins, who for the last twenty years had been president of the Tracy Chemical Co., Groton, Conn., died April 1 at his home in that city after an illness of two years. He was born in Ashaway, R. I., and was fifty-seven years old. He was onetime a salesman for the New York Pharmacal Association, of Yonkers, N. Y., and subsequently became identified with Fairchild Brothers & Foster, New York. Thereafter he joined Parke, Davis & Co., and in 1912 became president of the Tracy Chemical Corp.

Account Changes

Colgate-Palmolive-Peet Co., "Colgate *Ribbon Dental Cream" and "Colgate* Rapid Shave Cream," to Young & Rubicam, *New York.*

C. H. Holford, Minneapolis, drugs, to Kraff Advertising Agency, that city.

Miriam Dawson, Larchmont, N. Y., cosmetics, to W. I. Tracy, Inc., New York.

Kal Products, Inc., St. Paul, drugs, to McCord Co., Inc., Minneapolis.

Battle Creek Food Co., Battle Creek, Mich., to Erwin Wasey & Co., Chicago.

Multitone Rouge Co., Atlanta, Ga., to James A. Greene & Co., that city.

Parker Herbex Corp., New York, hair preparations, to Bermingham, Castleman & Pierce, that city.

William R. Warner Co., New York, "Sloan's Liniment," to Cecil, Warwick & Cecil, Inc., that city.

Charles Arnao Co., Minneapolis, "Arnoil," to Campbell, Mithun, Inc., that city.

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Neither secret formula nor manufacturing skill alone insure successful selling quality. The grade of basic materials you use, in the long run, makes or breaks your product. Over 40 years of highly successful experience with manufacturers and packers attests our ability to contribute the grade and variety of basic ingredient that will creditably take care of your product's quality.

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Chalk (Precipitated)	Henna	Olibanum
Chinese Shavings	Henasoap Shampoo	Orris Root
Cuttle Fish Bone	Indian Gum (Karaya)	Powdered White Soap

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Raw Material Markets

Chemicals **Essential Oils** **Natural Products**
Drugs **Medicinal Oils** **Flavors**

Quinine Advanced

The outstanding feature of the fine chemical market during the past month was the advance in quinine sulfate, bisulfate and the minor salts. This was caused by the establishment of higher quotations by the Dutch quinine cartel which sets the sales price throughout the world.

Following is the complete schedule:

	100 oz. lots
Quinine sulfate USP	36c per ounce
Acetate	78c " "
Arsenate	78c " "
Benzoate	78c " "
Bisulfate USP	36c " "
Citrate	51c " "
Dihydrobromide	54c " "
Dihydrochloride USP	51c " "
Ethyl Carbonate	50c " "
Ferrocyanide	78c " "
Formate	73c " "
Glycerophosphate	95c " "
Hydrobromide USP	46c " "
Hydrochlorosulfate	51c " "
Hypophosphite	70c " "
Lactate	65c " "
Phenolsulfonate	78c " "
Phosphate	62c " "
Salicylate USP	52c " "
Tannate USP	41c " "
Tartrate	78c " "
Valerate	57c " "
Urea Hydrochloride USP	51c " "

During 1932 imports of cinchona bark into the Netherlands, almost all of which came from Netherland India, dropped to 5,442 tons from 6,703 tons in 1931, while its exports, chiefly to Germany, France and the United States, were 2,351 tons and 3,371 tons respectively.

Exports of quinine sulfate and other quinine alkaloids of 372 tons during 1932 had a widespread distribution but were far below 579 tons shipped in 1931. Imports of "other alkaloids" totaled 1,490 tons in 1932 and 1,727 in 1931, with exports of the same group being 563 tons and 680 tons.

It was reported officially that the total area under cultivation to cinchona in India during 1932 comprised 2,789 acres. Extensions amounting to 194 acres were carried out during the year.

Glycerin Unchanged

Glycerin C. P. is unchanged in price from level of 10¼c that has now prevailed for several months. Underlying conditions point to a firm market, however, as crude material had a strong tone and the imported material tended to advance. With a decline in competition noted in the New York market from material of foreign origin, the position of domestic producers has been strengthened.

Price Indexes Up

Increased prices, as shown by all our indexes, in part reflect better business sentiment, but also demonstrate the effect of the departure of the United States from the gold standard. Currency inflation has not yet entered. Increased prices in May for individual items in the composite index for fifty drug and cosmetic products caused a rise of 1.7 in the index number to 56.6, high for the year.

The index of medicinal chemicals changed from 60.4 in April to 61.9 in May, a new high, increases being noted in quotations for bismuth, cod liver oil, menthol, mercury and quinine compounds, with no decreases in price.

The botanicals price index rose 0.9 to 69.6 for May, marking not only a new high for 1933, but also showing the second successive increase. Among the selected fifteen, no prices were lowered, while agar, belladonna, buchu, digitalis, ergot, gentian and rhubarb were pegged higher.

Also showing the highest value for the year, the essential oil price index rose 2.1 to 41.1, citronella declining, but anise, bois de rose, cananga, cassia, cloves, eucalyptus, geranium, lemon, peppermint and sandalwood rising.

Finally the index for cosmetic raw materials rose for the first time this year, from 59.1 in April to 60.1 in May. Beeswax, Japan wax, menthol, paraffin and stearic acid were quoted higher, with no reductions.

Menthol Firmer

During the past month the spot price of menthol was advanced 10c per pound and is now offered at from $3.00 per pound in case lots to $3.20 for lesser quantities.

It is said that were the market here based on recent cables from Japan the price would, of necessity, have to be much higher. Both the statistical position and the exchange favor higher replacement costs but the spot market seems well supplied and not without its competitive factor.

Consumers have not shown any decided tendency to enter the market very freely.

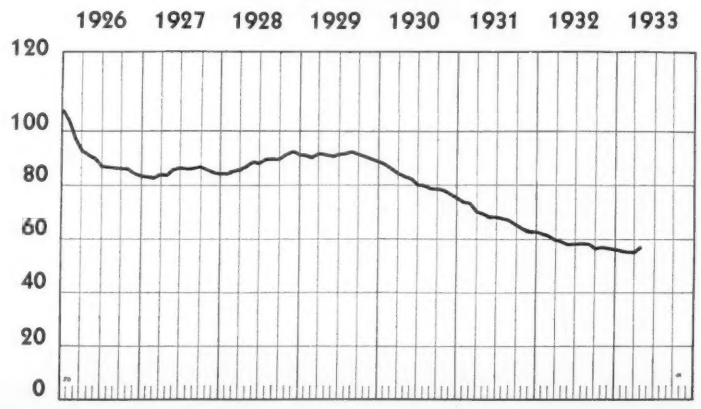
The United States continued to be the leading market for Japanese menthol in 1932, having been the destination of 227,400 kin (one kin equals 1.32 pounds) compared with 190,500 kin in 1931. Exports to all countries totaled 428,300 kin, an increase of approximately 15 per cent. over the previous year. Other large buyers in 1932 were France 62,000 kin, India 40,100 kin, Germany 14,500 kin, and Canada 10,800 kin.

Cream of Tartar Up

Imported cream of tartar advanced during the past month in conformity with the change in foreign exchange. There were no changes in scheduled prices of domestic producers but the undertone of the market is firmer.

Theobromine sodiosalicylate declined under competition during the past month. Offerings are at $1.85 per pound. Alkaloid held unchanged.

50 Raw Materials—Weighted Index
1925 Average Prices Equal 100



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U. S. P.

This Super Cocoa Butter, U. S. P., is absolutely odorless and will not get rancid. Its use permits of a better odor in the finished product with the saving of fully 25 per cent. on perfuming costs. Thus it is particularly valuable in lipsticks, rouges, shaving creams and face creams.

Packed in cases holding 110½ lbs. Smallest amount available is a cake weighing approximately 25 lbs.

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Titanium Dioxide, pure, for face powder, etc.
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Cod Liver Oil Stronger

Cod liver oil was much stronger in the spot market during the past month. The advancing tendency put prices up to from $21 to $23 per barrel for the leading brands.

The movement was in line with the statistical strength in Norway. Production this year showed rather a sharp decline. Fishing results to April 22 were as follows: cod, 109,899 tons; oil, 66,175 hectol., compared with 138,595 tons of cod and 84,697 hectol. of oil in 1932 and 106,274 tons of cod and 52,885 hectol. of oil in 1931.

Demand for prompt spot shipment was quiet but a good volume of business is being booked for future delivery. The undertone of the market at the advanced levels is quite firm and a continuance of the present tendency would not come as a surprise.

Canada not only continued to hold first place among foreign buyers of American prepared cod liver oil in 1932, but increased its purchases to the largest amount yet on record, 17,363 gallons valued at $20,036. This represents two-fifths of the volume and one-fourth of the value of the foreign trade to all countries, (including American noncontiguous territories) in this oil in 1932, which totaled 41,276 gallons at $75,065. The next five markets that year were Porto Rico, Hawaii, British India, Philippine Islands, and Panama. Cuban and Nicaragua purchases, which ranked second and third in the previous two years, shrank to small amounts in 1932.

Bismuth Steady

Movement of bismuth metal to manufacturers of salts was reported as being in good volume during the past month. Prices were very steady at 85c in ton lots and 90c per pound in lesser quantities.

Salts remained unchanged in price with a minimum of competition in this market.

Consulate General, Frankfort-on-Main, reports that Germany is an important world producer of bismuth salts and that, in addition to supplying its own considerable requirements for medicinal, cosmetic and other purposes, carries on an extensive export trade in these commodities.

German exports expanded notably in 1930, rising to 99.7 metric tons, from 86.1 in 1929. Since 1930, however, the trade has contracted greatly, dropping to 59.2 tons in 1931 and undergoing further decline to 53.3 tons in 1932. In point of value the decline has been much more pronounced. Increasing competition following the dissolution several years ago of the former International Bismuth Salts Convention, comprising producers in Germany, Great Britain, France, Italy, and the Netherlands, is understood to have been largely responsible for the drop in market prices.

Citric Firm

Citric acid has been meeting with a moderate improvement in sales to the beverage trade. The undertone of the market is firm but without price feature. In view of low prevailing prices and the approach of the heavy consuming season, manufacturers are more encouraged.

Belgian exports of citric acid were down in 1932, due largely to the radical drop in shipments to the United Kingdom, formerly their chief customer. In 1931 the United Kingdom took 4,196 metric quintals and in 1932 only 366 metric quintals. Shipments to the United States also declined from 826 metric quintals in 1931 to 600 in 1932.

Alcohol May Go Higher

Considerable interest is shown in the denatured alcohol market. There are rumors, although unconfirmed, that the next quarterly price schedule will show advances over present quotations. Raw materials, both molasses and grain, show an upward tendency. Although business done during the past month shows some gains, the total volume so far this year has been off to the extent that an upward price movement would be necessary to show a fair return to distillers.

The undertones of the market are therefore quite firm and developments are being watched closely.

Quotations for denatured alcohol to be delivered during the period April 1 to June 30, 1933 are as follows:

	Carloads drums	*Single drum price*
No. 1 spec	.335	.415
No. 5 comp	.385	.465
23 A, spec	.37	.49
39 B, spec	.38	.50
40 M, spec	.34	.46

Prices quoted here are f.o.b. works.

The position of tartaric acid is one of much strength. Domestic material is still offered at 20c per pound but in view of higher crude material costs an upturn would not be unlikely.

Mercury Continues Rise

The upward tendency in mercury prices established some time back continues. Prices ranged $2.00 per flask higher during the past month with quotations at from $56.50 to $58.00 as to quantity taken.

The feature of the market is that the foreign material has become the dominant factor, there being practically no domestic metal available. Production in the mines of this country had practically ceased due to the low prevailing prices of several months back. What available stocks existed have now been entirely consumed so that this market is dependent upon foreign countries for supplies. A fair amount of foreign mercury is available.

It is generally felt that the higher prices now prevailing will again stimulate the domestic producers to reopen their mines and again establish a domestic source of supply.

The strong market for raw material is reflected in the mercurial group. Demand has been good, lending an additional element of firmness to the undertones on spot. A rise in price is generally expected.

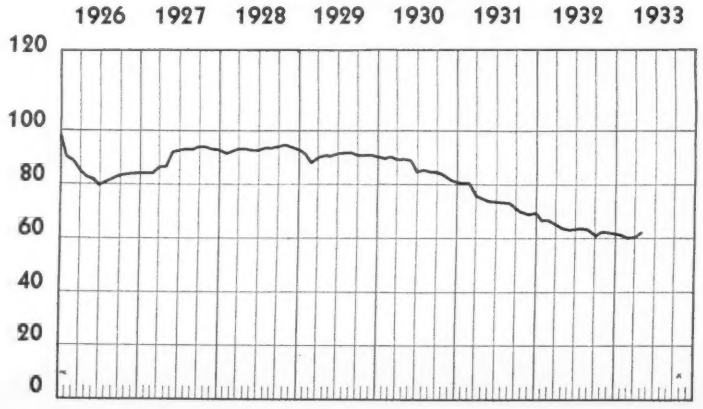
Potassium Iodide Higher

Leading producers of potassium iodide advanced prices and now quote at $2.15 per pound in lots of 25 pounds. Lesser quantities were offered at $2.20. Demand has broadened somewhat under the upward tendency in prices.

Vanillin Down

Leading producers of vanillin announced a sharp reduction in price during the past month. This was done to bring a certain competitive factor in line. Vanillin (Clove Oil) is now offered at $1.50 per pound in 100 pound lots or more and at $1.75 for smaller quantities. Vanillin (Guaiacol) is offered at a range of from $1.25 to $1.50 as to quantity taken.

15 Medicinal Chemicals—Weighted Index
1925 Average Prices Equal 100



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SPERMACETI CERESINE
GLYCERINE STEARIC ACID RED OIL

Peppermint Oil Up

The feature of the essential oil market was the sharp rise in peppermint oil prices. Natural oil is being offered at from $2.40 to $2.60 per pound. The range a month ago was $1.90 to $2.00. Redistilled oil is up to from $2.65 to $3.00 per pound as compared to a range of from $2.05 to $2.15 a month ago.

A diversity of opinion prevails as to the possible future trend. Some dealers are of the opinion that the advance has been too rapid and that a reaction is likely, particularly as the movement of oil has already been slowed down by the sharply rising price level. These factors feel that at present rates of consumption there is ample oil available and that with a new crop season approaching an easier tendency at the source will most likely develop.

The market, however, is not without its bullish factors as well. Present prices are still below normal. Production of oil has been declining over the past several years. There is also the prospect of Federal aid as a result of recent legislative measures and it is on the prospect of such support that much of the primary market strength is based.

Spearmint Oil Advances

Oil spearmint, in sympathy with peppermint, also advanced sharply during the past month. Prices ranged from $1.30 to $1.50 per pound as to quantity and seller. It is said the future trend would depend to a great extent on replacement costs.

Orange Oil Firmer

Orange oil was firmer during the past month in keeping with the relatively higher cost of foreign exchange. West Indian oil advanced to basis $1.05 to $1.25 per pound. Italian and California oil were unchanged in price.

Exports of orange oil from French Guinea, West Africa increased appreciably during the past three years, according to the Journal Officiel de La Quinee Francaise, which shows that the quantities shipped during the first nine months of 1930, 1931, and 1932 amounted to 25,960 pounds, 53,240 pounds and 91,300 pounds respectively. The aggregate value of these shipments, however, declined relatively, being recorded as follows for the nine month periods: 1930, $69,720; 1931, $14,880; and 1932, $19,520.

Eucalyptus Higher

Oil eucalyptus was higher in the spot market in conformity with the rising tendency of foreign exchange against the dollar. In drums price ranged from 22c to 23c per pound and in cans the schedule was from 24c to 26c. Undertones were firm at the new levels as some consumers showed tendency to cover.

Lemon Oil Steady

Lemon oil failed to profit by the rising exchange on the primary market, Italian oil being offered at from 80c to $1.05 per pound. Californian oil moved in fair volume at previous prevailing price of 65c per pound.

No improvement was evidenced in the Italian citrus oil situation during March. Exports were of small importance. Regarding previous estimates, placing the prospective lemon oil output of the current season at 240,000 kilos, it is thought in some quarters that the output will not be that large. The seasonal orange oil output is expected generally to be about 15,000 kilos compared with 80,000 to 90,000 kilos in the preceding year. During the month, lemon oil prices declined about 10 per cent. and at the close of March were: Sponge process, 5.50 lire per Italian pound; machine process, 4.00 lire per Sicilian pound. Orange oil quotations declined from 20.00 lire to 9.10 lire per Sicilian pound during March. Demand for bergamot was lessened compared with February and prices declined from 11.00 lire per Sicilian pound to lire 9/9.40. The Bergamot Consortium was still in existence, being concerned primarily with the disposition of about 600,000 pounds of oil now on hand. (Consul C. Porter Kuykendall, Naples.)

Cassia oil exported from Hong Kong in 1932 totaled 263,327 pounds valued at $114,281, as compared with 292,533 pounds valued at $137,123 in 1931. Shipments of this oil to the United States in 1932 amounted to 99,867 pounds valued at $18,000, as against 121,867 pounds and $62,218 in 1931. Eighty-three per cent. of cassia oil shipped in drums in 1932 represented purchases by the United States. Cassia oil shipped in cases was distributed principally to Japan, the United Kingdom, India and France. (Department of Commerce).

Camphor Higher

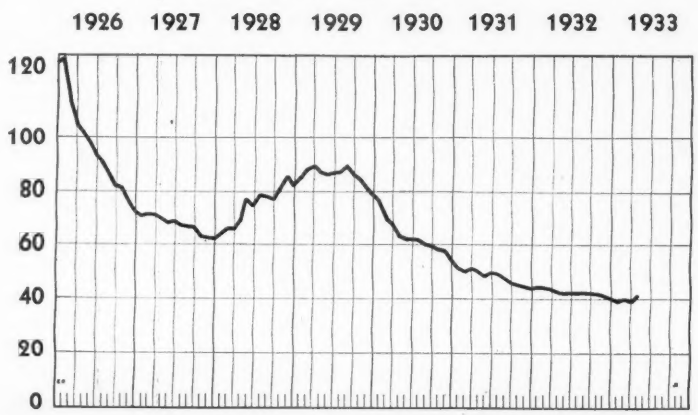
Camphor prices were advanced in relation to the added cost to replace caused by higher exchange in the primary market. Japanese refined slabs were offered at from 42c to 43c per pound, refined powder 43c to 44c per pound and ½ oz. tablets 47c to 48c per pound. With the exception of tablets, which have been active and in good demand, the market as a whole is not particularly well supported by buyers for consumption. It is felt in local circles that any spurt in inquiry would stimulate competition.

Consul Sydney B. Redecker, Frankfort-on-the-Main, reports that German exports of synthetic camphor have declined consistently in recent years, from a peak of 3,049 metric tons in 1929, to 2,181 tons in 1930, 1,788 tons in 1931, and only 1,352 tons in 1932. Prices, which had held up relatively well until 1931, also contracted markedly in 1932, and whereas the average value of the exports was 3,514 marks per metric ton in 1929, an increase to 3,563 marks in 1930, it dropped to 3,334 marks in 1931, to fall to 2,774 marks in 1932.

A principal factor in the reduced trade was the sharp decline of sales to the United States, the leading foreign consumer of the German product. The exports to the United States dropped from 1,805 metric tons in 1929 to 555 tons in 1932. Nearly all other important buying countries decreased purchases, including France, British India, Switzerland, and Soviet Russia. The marked exception to this general downward movement was Great Britain, exports to that country having increased in 1932 to 247 tons, from 108 tons in 1931, and 112 tons in 1929.

Oil tansy was up sharply to from $1.75 to $1.95 per pound. The strength in this commodity was due to replacement costs rather than to any increased demand here.

15 Essential Oils—Weighted Index
1925 Average Prices Equal 100



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Geranium Oil Advances

A sharp advance featured the market for oil geranium. Replacement costs have been upward in keeping with the cost of foreign exchange. The statistical position also favored higher prices as stocks here are not large and are in firm hands. Bourbon oil ranged from $4.50 to $5.00 per pound being an advance of 25c over our previous quotations. African oil was also higher at from $4.50 to $5.25 per pound. The Turkish oil was in small demand and remained unchanged at from $1.65 to $1.85 per pound.

The geranium industry in the Island of Reunion has become important during the past few years, states Vice Consul Percy G. Kemp. Exports during the period 1931-32 indicate production of 75,000 kilos as compared with 80,000 kilos for the 1930-31 crop.

Production of geranium oil in the Island of Reunion for 1932-33 is unofficially estimated at only 40,000 kilos. Shipments during the first three months of the present crop year totaled 11,962 kilos.

Bois de Rose Firm

Bois de Rose was firm at advanced levels. Brazilian oil sold at from $1.00 to $1.10 per pound and Cayenne ranged from $2.00 to $2.20. Improved demand from manufacturing consumers has cut further into the small supplies available.

Citronella 1932 Imports

During 1932 Ceylon increased its exports of citronella oil to 1,274,544 pounds from 1,205,808 pounds in 1931 and 1,212,107 pounds in 1930. The 1932 shipments were the highest recorded since 1927 when 1,371,844 pounds were shipped. The United States continued to be the leading market, taking 552,761 pounds in 1932 compared with 391,194 pounds in 1931 and 462,264 pounds in 1930. The United Kingdom received 333,125 pounds, 291,713 pounds, and 302,665 pounds in the above respective years.

Lavender Oil Active

The minimum spot price for oil lavender USP was $1.40 per pound with the range wider as to quality and seller. A satisfactory volume of business was done during the month just past and undertone in all quarters was firm.

Lime Oil Higher

Distilled lime oil advanced sharply on spot in keeping with the upward tendency of replacement costs. Quotations ranged from $7.25 to $7.75 per pound.

The advance in raw material put the spot market price of anethol up to the basis of from 90c to $1.05 per pound. A somewhat larger inquiry was noted at these levels.

Ylang-Ylang Exports

An increase occurred in Philippine ylang-ylang oil exports in 1932, 595 kilos having been shipped abroad compared with only 10 kilos in 1931. Exports of ylang-ylang had declined steadily since 1913, when exports totaled 2,172 kilos. The outbreak of the World War brought the Philippine industry to an abrupt stop since practically all of the distilleries operating at the same time were German-owned and the French market which absorbed a large share of their total output was closed to them. During the period the distilleries were shut down, thousands of ylang-ylang trees were cut down and sold by their owners to the manufacturers of "Zuecos," a type of wooden shoe worn by Filipinos.

Clove Oil Up

Clove oil showed an advance to the basis of from 80c to 85c per pound. The market kept its strong undertone in keeping with movement of values in the raw material. Demand was somewhat more active.

Almond Oil Higher

Higher cables on sweet almond oil resulted in an advancing spot market. Prices were marked up to the basis of from 47c to 53c per pound. The higher replacement values were about covered by the spot advance.

Petit Grain Advances

To compensate for the higher price asked for shipment, importers of oil petit grain advanced quotations to basis of from 95c to $1.00 per pound. Undertones were strong following the advance notwithstanding the absence of important consumer request.

Under competition, amyl butyrate has been shaded to from 95c to $1.50 per pound.

Eucalyptol Higher

Eucalyptol advanced during the past month to the basis of from 57c to 60c per pound. This reflected the higher price of raw material, because of the rise in exchange. Demand is reported improved at the new level and firm undertones prevail.

Cade Oil Quiet

Spot prices for oil cade ranged wider during the past month being based on opinion of individual sellers. Some quoted 24c per pound while others were as high as 30c. Demand remained quiet.

Benzoin Gum Advances

Owing to the foreign exchange situation local importers have been forced to advance prices of gum benzoin. Sumatra is now selling at from 19c to 22c per pound and Siam at from $1.05 to $1.30 per pound. The rise on spot about covers additional cost of replacement, as demand was but moderate in support of the upward movement.

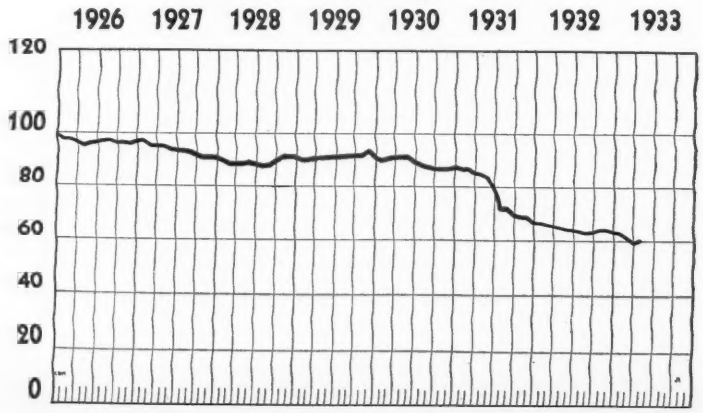
Exports of gum benzoin from Siam gained in the fiscal year ended March 30, 1932, amounting to 42,400 pounds compared with 33,000 pounds in the preceding year. The territory from which the balsam is derived is said to be a rather limited district along the river Mekang. It is obtained by wounding the bark of the tree near the origin of the lower branches whereupon a juice exudes which hardens upon exposure.

Arabic Gum Active

The present situation in gum arabic is a total reversal of the market trend that prevailed since the first of the year. Amber sorts advanced to the basis of from 6¾c to 7¼c per pound. Buying has been brisk and with a steady advance in exchange the market is firm and active. At this writing the higher grades of gum have not been advanced but the trend is in that direction.

25 Cosmetic Raw Materials—Unweighted Index

1925 Average Prices Equal 100



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Vanilla Beans Steady

The vanilla bean market was steady on the whole during the past month, especially the Bourbons, the import costs of which had been raised by the advance of the franc against the dollar. Quotations for Bourbon beans ranged from 70c to $1.25 per pound.

No general advances are expected however above that necessary to correct the difference in exchange rates. The statistical position of this commodity is such that demand would have to increase a great deal to create a fundamentally strong position.

Mexican beans are without new feature leading factors being governed in their ideas by supply and demand.

Tonka beans are slightly higher at $1.45 to $1.70 per pound as to quality. The quality range has widened somewhat being the opinion of certain factors as to the true value of beans of especial merit. Demand continued light the change in price merely reflecting the advancing tendency of replacement costs.

Casein Exports

Argentine exports of casein during the first two months of the current year, according to official figures, increased 129 per cent. in quantity and 355 per cent. in value over corresponding months of the previous year. Shipments in the first two months of 1932 totaled 1,930 metric tons (4,254,878 pounds) valued at 80,659 gold pesos compared to 4,424 tons (9,753,150 pounds) valued at 367,089 gold pesos during January and February 1933. The average price of casein during the first two months of 1933 was 82.98 gold pesos per ton compared with 41.79 in the first two months of 1932.

Spruce Oil Easy

Competition and a narrow consumer outlet continued to keep oil spruce on the easy side. Prices ranged from 70c to 75c per pound as to quantity and seller being without change but with an easy undertone prevailing.

Cassia Oil Strong

Oil cassia was very strong in the spot market being influenced by cables which indicated a much higher replacement market. Local factors raised prices for redistilled oil to basis of 95c and $1.00 per pound.

Cedarleaf Oil Higher

Upward tendency in cedarleaf was noted on the probability of inflation raising the cost to produce this item. Prices ranged from 60c to 65c per pound as to quantity taken. Business out of spot stocks was quiet.

Psyllium Seed Dull

The psyllium seed market is without feature. Some attempts on the part of local distributors to obtain higher prices were without marked success. This was due to a well supplied market and a rather inactive buying movement here. Although the cost to import French seed is higher due to the exchange situation local factors were unable to obtain more due to the demand factor and the low prices prevailing on other psyllium seeds.

Chamomiles Higher

Roman chamomile flowers were difficult to obtain in the spot market last month. Offerings of flowers from abroad were light and prices higher in keeping with the low supplies in the primary market and the advance in exchange. Local dealers therefore marked up prices with the range now extending at from 32c to 45c per pound as to quality, quantity and seller.

Hungarian flowers also advanced 1c per pound to the basis of 15c and 16c as to quantity taken. Demand has not changed materially.

Anise Oil Advances

U. S. P. Anise oil on spot advanced 3c per pound during the past month to a range of from 34c to 37c. A fair demand was noted and the advance was supported by cables received carrying higher replacement costs.

Wax from Flax

According to recent reports a wax is being produced experimentally in France from flax. No developments on a commercial scale have been in evidence, however. It is also understood that flax wax has a certain production in Germany.

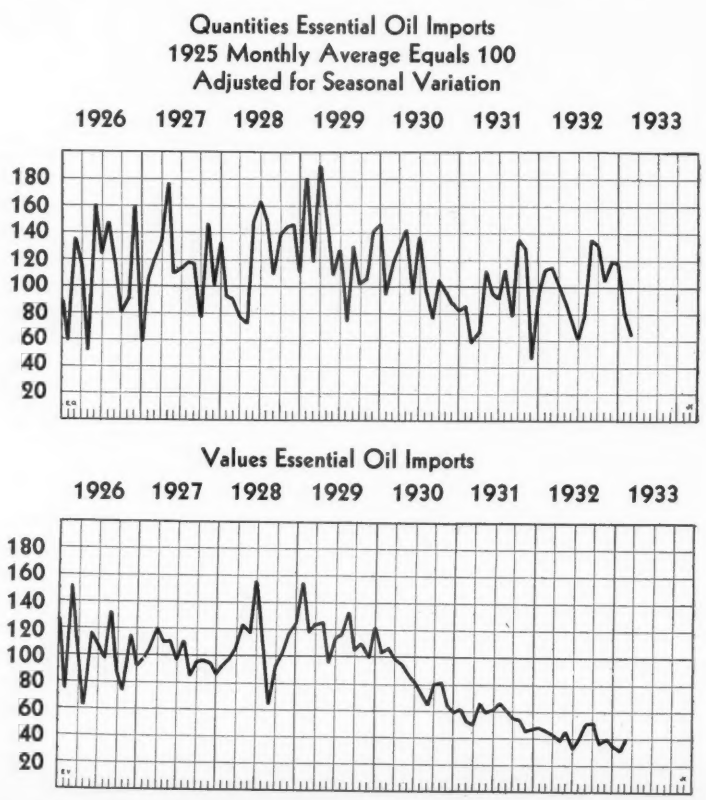
In March, 1931, a paper on the subject of flax wax and its extraction was published by the director of research of the Linen Industry Research Association at Belfast, Ireland, as a result of extensive research. According to the author, flax wax corresponds closest to beeswax, from which it is distinguished by a slightly lower saponification value, a higher iodine value, and a distinctly higher melting point.

Tolu Balsam Exports

Shipments of balsam tolu from Puerto Colombia increased from 59,300 pounds valued at $30,400 in 1931 to 93,750 pounds worth $47,300 in 1932. Exports through Puerto Colombia, ocean port of Barranquilla, largely originate in the interior sections of the country. (Consul Erik W. Magnuson, Barranquilla).

Oleoresin Capsicum Stronger

Oleoresin capsicum turned definitely stronger during the past month being influenced by advancing raw material prices induced by the upward trend of foreign exchange. Spot prices ranged from $1.90 to $2.15 per pound with the undertones at these levels quiet firm.



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Pyrethrum Firmer

Pyrethrum flowers are firmer in keeping with the primary market situation on this item. Prices on spot ranged from 16c to 17c per pound, with powdered at from 20c to 21c. This item continues to meet with a satisfactory seasonal demand.

According to official reports experimental plantings of pyrethrum by the Department of Agriculture in Kenya, East Africa, during the last few years, followed by distribution of seed of selected stock, have led to the beginning of a promising industry.

A Pyrethrum Growers' Association has been formed, and steps are being taken to safeguard the industry both in respect of importation of planting material and of marketing quality. A fair local demand for the product is said to exist for making the kerosene-pyrethrum spray used by coffee growers in combating certain insect pests.

It is reported that the Yugoslav Government has provided funds for the opening of a pyrethrum institute at Split with the view of developing the local industry along scientific lines. Also, it is understood that cooperatives are being established to purchase the dried flowers for the purpose of mixing and providing a standard grade for direct sale.

Exports of pyrethrum flowers from Japan during 1932 showed a volume gain of over 100 per cent. compared with 1931. The 1932 shipments aggregated 12,582,000 pounds compared with 5,831,400 pounds in 1931. About 90 per cent. of last year's pyrethrum exports was destined to the United States, the remainder going to Europe, Canada and Hong Kong.

Tragacanth Unchanged

Gum tragacanth has been slow in reflecting the added replacement cost due to the revaluation of the dollar. Prices on spot remained without change during the past month. Although stocks here are ample for consumer requirements there is a general feeling that some adjustment will be witnessed shortly if exchange rates continue the trend established.

Mastic Gum Higher

Gum mastic is higher on the basis of from 27c to 29c per pound. The tendency was still upward in view of the sharp rise at the source. Fair sized business was done by firm holders on spot.

Arnica Flowers Firm

Spot prices on arnica flowers were quite firm as import costs had advanced with exchange. The rise in replacement costs, however, has yet to stimulate manufacturing consumers to the extent where they are anxious to protect future requirements. The market was therefore quiet with dealers firm in their views.

Belladonna Advances

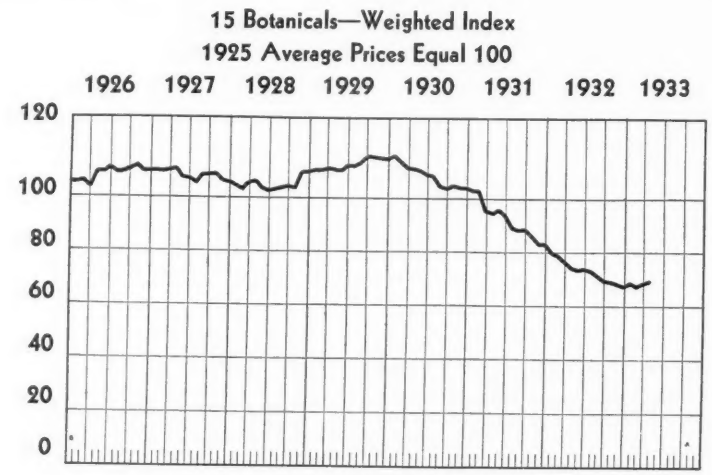
Belladonna leaves advanced to from 11c to 14c per pound based on quality of material offered. Replacement costs were higher in keeping with the rise in German exchange. Demand gained moderately under rising tendency of replacement costs.

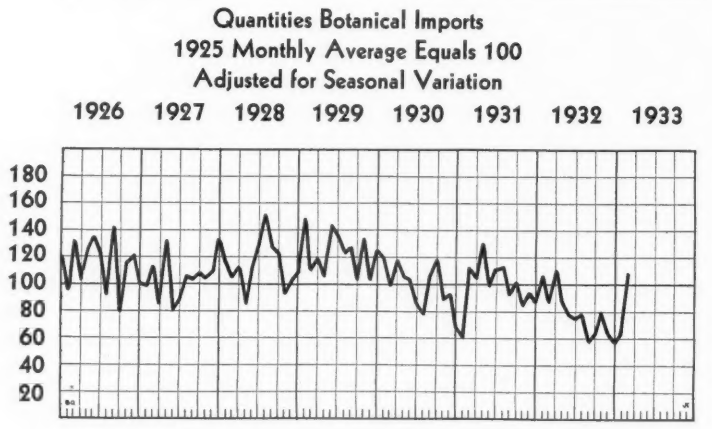
Cardamon, decorticated in cases was advanced during the past month to the basis of 52c to 54c per pound. Bleached was also higher at from 80c to $1.10. Demand was confined to immediate requirements.

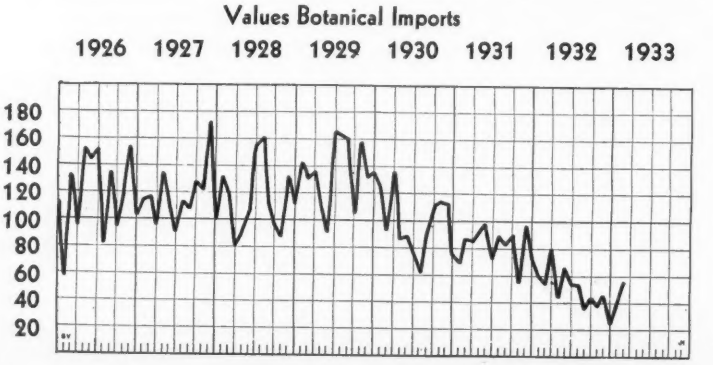
Olibanum Gum Active

Importers of gum olibanum reported awakened interest in this commodity and a sharp gain in sales was noted. The result was a strong spot market and higher prices. Siftings sold at from 6c to 7c per pound, tears Number 1 extra at 19c and 21c and number 2 at from 14c to 15c.

Caraway seed was advanced to from 8c to 8½c per pound. The strength in this market was due partly to high exchange rates and partly to the fact that spot stocks have been kept low by Department of Agriculture rejections of recent shipments.







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Ginseng Exports

American ginseng exports contracted to 171,318 pounds worth $852,554 in 1932, from 265,300 pounds valued at $1,922,-243 in 1931. Shipments abroad during January and February 1933 totaled 17,200 pounds at $41,600. The formidable competition afforded the American product in the Far East by Chosen (Korean) ginseng is reflected somewhat in the heavy and increasing output of ginseng in Chosen, as evidenced in the following production statistics: 1926, 472,312 pounds, 1930, 772,056; 1931, 947,334; 1932, 1,075,130. (Consul General John K. Davis, Seoul).

Local stocks of ginseng in the hands of importers were heavy in February and prices were not attractive to American growers. Freight rates from the West Coast on ginseng had been cut from $120 per ton to $80 per ton but up-country dealers were still holding off buying, practically no important auctions having been held to date. Difficulty has been encountered with ginseng received on consignment due to the misunderstanding of shippers concerning the long term credit usually extended in this business, dealers often receiving from three to nine months credit from the importer. (Trade Commissioner Thomas C. Barringer, Hong Kong).

Imports Detained

Following is a list of imports at the Port of New York detained by The Food and Drug Administration as being in violation of act governing product in question. Detentions are listed for the past month.

Pimentos.....250 cases	St. Johns Bread 30 cases
Fennel Seed....50 bags	Caraway seed1980 bags
Mustard Seed .200 bags	Coriander Seed125 bags
Anise Seed....142 bags	Squill (Red)...30 bags
Gentian Root...67 bags	Pepper, black .250 bags
Celery Seed ....15 pkgs	Cumin Seed ..195 bags

Montan Wax Higher

Spot quotations for montan wax were advanced to from 4½c to 5½c for crude to a range of from 26c to 28c per pound for pure bleached. The market was active and prices were based on higher replacement cost that resulted from the advance of the German mark against the dollar.

Grains of Paradise Down

Grains of Paradise declined 1c per pound during the past month to the basis of from 8c to 10c. Recent arrivals of material and the lower consuming demand weakened the market.

Lycopodium Up

Lycopodium market gained slightly sales being noted at from 22c to 24c per pound, an advance of 1c during the past month. Stocks in hands of dealers are not large.

Saffron Firm

Trade in Spanish saffron is restricted to small lots but the market is firm in view of the depreciated value of the dollar abroad. On spot the market ranged from $10.50 to $11.50 per pound.

Lavender Flowers Higher

Although comparatively few sales are reported, lavender flowers select advanced to 30c and 32c per pound as to quantity. This advance absorbed the higher cost to replace.

Beeswax Higher

The higher replacement cost that came with the movement of sterling against the dollar resulted in higher prices for beeswax. The white wax is selling at from 30c to 34c per pound, yellow refined 21c to 24c and yellow crude 15½c to 20c per pound. A good business was done at the higher figure.

Gentian Root Up

Only small quantities of gentian root are available on spot and the article is quite difficult to replace. Prices were again advanced to basis 17c to 18c per pound. Ground material is 19c to 20c.

Mullein Flowers Higher

Small stocks and higher exchange rates abroad resulted in advance of local quotations for mullein flowers. Quotations were put up 5c per pound to the basis of from 95c to $1.00. Demand continued irregular and mostly for small quantities.

Ozokerite Higher

Agents for leading European producers of ozokerite advanced prices sharply. Hard brown is 26c to 28c, green hard same, and yellow refined 21c to 25c. This advance reflected upward tendency of primary market exchange. Demand on spot was good.

Carnauba Advances

Number 1 carnauba wax is up 1c per pound to the basis of 23c to 24c. Consumers are rather anxious to cover at least a portion of their future requirements resulting in a strong spot market. There are comparatively few offerings coming from the primary market.

Buchu Leaves Up

Buchu leaves were advanced on spot to cover the rise in value of the pound sterling. Quotations ranged from 19c to 20c per pound. Demand continued moderate and without sign of change from consuming levels established by trading during the past several months.

Marjoram Advances

A 2c per pound advance in French marjoram placed this commodity on a basis of from 21c to 22c per pound. This reflected advance in foreign exchange placing the market in a firm position but without appreciably expanding the inquiry.

Juniper Firm

Juniper berries are quite firm on spot at from 5c to 5½c per pound. Advance in replacement costs based on present exchange in the primary market has created stronger undertones. Demand remained within conservative lines.

Sandarac Up

Sandarac gum went to from 23c to 24c per pound on spot. This was in keeping with the higher cost to replace. Importers stated demand was more active at the new levels.

Digitalis Rises Sharply

Stocks of digitalis leaves are practically exhausted and with no possibility of obtaining replacements until the new crop is available local holders raised prices sharply to basis of from 25c to 27c per pound.

Blue Malva Up

Spot supplies of blue malva flowers are very limited and as stocks abroad are also in small supply the replacement costs have advanced sharply. Quotation here ranged from 60c to 65c per pound. Black flowers remained unchanged at from 18c to 33c with demand along quiet lines.

Thyme Higher

Cost to import thyme from France was higher. Spot quotations were advanced accordingly placing this commodity on the basis of from 7¼c to 8c per pound. Tendency was toward a firmer and somewhat more active market.

Sage Rises

Sage is up fractionally on the basis of rising replacement costs. Prices ranged from 5c to 5½c per pound. Demand was somewhat broader and steady throughout the past month.

Celery Seed Advances

Celery seed is up on the spot market with prices ranging from 40c to 42c per pound. This was in keeping with the rising cost to replace and some improvement in demand.

A storage battery has been invented in France in which iodine enters as an important factor. (Trade Commissioner Paul Malone, Paris).

Patents

UNITED STATES PATENTS

Toilet Soap

In manufacture of solid perfumed toilet soap, during saponification of fat with alkali, incorporate composition of aromatic odor comprising terpenes, resins and floral wax homogeneously emulsified with suitable emulsifying agent, such as ammonium sulforicinoleate. P. Villain. U. S. P. 1,887,743. Filed Apr. 16, 1929.

Hair Dressing

Solution is used containing alcohol and water together with protein of gliadinzein group. B. N. Lougovy. (Ass. Ellis-Foster). U. S. P. 1,884,015. Filed Jan. 18, 1928.

Magnesium Hydrate Tablets

Moist hydrated magnesium oxide is granulated after admixture with diluent and binder such as calcium carbonate and gum arabic. Granulated mixture may then be formed into tablets. W. C. McGowan. (Ass. Milnesia Laboratories, Inc.) U. S. P. 1,889,366. Filed May 3, 1928.

Hexamethylenetetramine Compound

Equimolecular proportions of hexamethylenetetramine and methylene diphosphoric acid are combined in inert solvent such as alcohol and precipitated compound is separated. It is suitable for treating affections of uropoietic system. E. Freund. (Ass. Heyl & Co.) U. S. P. 1,889,090. Filed April 20, 1929.

Resorcinol Monoethers

Amyl, benzyl, cyclohexyl or phenylethyl resorcinol ethers have high bactericidal efficiencies. E. Klarmann and L. W. Gates. (Ass. Lehn & Fink). U. S. P. 1,888,827. Filed Mar. 12, 1931.

Butylphenol Compositions

Condense butyl alcohol and phenol in presence of zinc chloride and hydrochloric acid to form o-sec-butylphenol with antiseptic properties. R. R. Read. (Ass. Sharp & Dohme). U. S. P. 1,887,662. Filed 1,887,662

Spinal Anesthetic

Procaine is used with glue-like adhesive such as wheat-flour mucilage which is insoluble in spinal fluid and serves to regulate time, extent and intensity of anesthesia. G. P. Pitkin and C. W. Hooper. (Ass. H. A. Metz Laboratories, Inc.) U. S. P. 1,888,934. Filed May 10, 1928.

Concentrating Vitamins

Treat crude vitamin-B extract with glacial acetic acid, dilute with acetone, filter, remove solvent from solution at low temperatures, suspend residue in water, treat with adsorbent carbon and extract vitamin from carbon by means of hydrochloric acid and alcohol. B. Sure. U. S. P. 1,889,427. Filed Mar. 19, 1930.

Concentrated Vitamin Extract

Concentrated vitamin extract is incorporated into vitamin-preserving acidic fruit mass and product may be chocolate coated. E. R. Alexander. (Ass. Vitamin Co. of America). U. S. P. 1,886,931. Filed Aug. 1, 1930.

Vermicidal Iodine Composition

Composition suitable for veterinary practice is prepared from protein material such as that from eggs containing chemically combined chlorine and adsorbed Iodine. W. H. Engels. (Ass. Merck & Co.) U. S. P. 1,889,195. Filed May 9, 1927.

Shaving Cream Emulsion

Ingredients are stearic acid 9 to 12, coconut oil 6 to 8, zinc stearate 0.15 to 0.20, paraffin 6 to 8, ethyl p-aminobenzoate 0.80 to 3.0, glycerin 5.5 to 7.5, borax 0.8 to 1.1, ammonia 0.3 to 0.4, water 56 to 75 parts. E. L. Mack and C. W. Bennett. (Ass. Bennett-Mack Corp.) U. S. P. 1,888,601. Filed Mar. 7, 1930.

GERMAN PATENTS

Disinfectants and Preservatives

Bis (hydroxyaryl) sulfides, their salts and substitution products are destructive to microorganisms and their use as disinfectants and preservatives is suggested. I. G. G. P. 563,643. Filed Oct. 8, 1929.

Therapeutic Oil Solutions

Insoluble or difficultly soluble lipoids are brought into solution for therapeutic uses by method of patent 501,502, benzyl alcohol being replaced by octyl alcohol or terpenes such as thymene, citral, terpineol, eugenol, cinnamon oil, etc. as solvents. Chem.-Pharmaz. A. G. Filed Feb. 19, 1927. Addn. to 501,502.

Therapeutic Iodine Preparations

An alcoholic solution containing iodine and potassium or sodium iodide is added to a hot alcoholic solution of soap and sodium benzoate, salicylate or neutral phthalate and mixture poured into molds to set. Products are stable at tropical heat. R. Geller. G. P. 563,211. Filed May 3, 1928.

Refining Vegetable Waxes

Solution of carnauba wax or like vegetable wax in an oxygenated organic solvent is treated with activated carbon. Organic solvent may be methanol, alcohol, ethyl acetate, methyl glycol ether or dibutyl ketone. A. Riebeck'sche Montanwerke A. G. G. P. 565,055. Filed Oct. 25, 1927.

Medicinal Preparations

Preparations to accelerate degradation of glucose are obtained from animal materials such as brain or spleen. Materials are extracted with water after drying with acetone and ether and extract treated with alcohol. Precipitate containing active substance is again extracted with water, and extract is purified by means of kaolin or alumina. H. Kraut and E. Bumm. G. P. 563,153. Jan. 30, 1931.

Medicinal Preparations Containing Sulfur

Sulfur dichloride which may contain dissolved sulfur, is added to oil, paraffin wax or wool fat and mixture treated with water to produce colloidal sulfur. Product is washed with water. H. Kaufmann. G. P. 563,010. Filed July 14, 1928.

Medicinal Substances

Inorganic medicinal chemicals may be converted into forms readily assimilated by animal organisms by injecting substance into living plants and drying and pulverizing plants. H. Much. G. P. 564,609. Filed Sept. 8, 1928.

Dissolving Medicines

Medicines insoluble in water, except camphor, soporifics and hypnotic alkaloid bases, are dissolved by using water soluble derivatives of bivalent alcohols in which one hydroxy group is substituted by an acyl, alkyl or alkylene group. S. A. Ind. Chim. Bale. G. P. 562,884. Filed Feb. 14, 1926.

Hydriodides of Alkaloids

These are prepared by action of correct amount of arsenic triiodide on alkaloid in indifferent liquid miscible with water, such as lower alcohols. Hydriodides of brucine, strychnine, quinine, morphine, etc., are obtained. Temmlerwerke Verein. chem. Fabriken. G. P. 564,958. Filed April 18, 1931.

Stable Oil Solutions of Alkaloid Salts

These are obtained by alcohols containing at least 6 carbon atoms, these being soluble in oils. Examples are octyl, decyl, benzyl and phenylethyl alcohols. Solutions are used for injections. Chem. Pharm. A. G. G. P. 564,992. Filed Mar. 13, 1928.

Sterols

Cholesterol and other sterols are recovered from residues from manufacture of train oil by extraction petroleum ether. Extract may be concentrated and treated with methyl alcohol to precipitate fats and fatty acids, and filtrate further concentrated to cause crystallization of sterols. L. Brauer and H. Seel. G. P. 564,322. Filed Apr. 12, 1930.

Lecithin Emulsions

Aqueous emulsions containing lecithin and oil are prepared by mixing oleaginous lecithin, e. g., soy-bean lecithin, with benzyl alcohol, adding more oil, if desired,

and agitating mixture in water. Other alcohols or alcohol derivatives may be used in association with benzyl alcohol. Hanseatische Muhlenwerke A. G. G. P. 561,200. Filed May 25, 1930.

Capsicum Extracts

Extracts or solutions of extracts of capsicum are stabilized by 0.01 to 0.05% of thiosinamine. E. Blank. G. P. 566,105. Filed June 9, 1929.

Injection Preparations

Stable oily solutions for injection are obtained by dissolving organic preparations in primary alcohols containing at least 6 carbon atoms, such as octyl, decyl, benzyl or phenyl-ethyl alcohol. Chem. Pharm. A. G. G. P. 560,987. Filed Mar. 13, 1928.

Salves and Emulsions

Refined lecithin and cholesterol are prepared by running suitable fats and oils into boiling alcohol, evaporating resulting solution, treating residue with acetone, evaporating acetone extract and working up evaporation residues in known manner. These residues may also be used as salve bases and emulsifying agents. A. G. f. Mediz. Produkte. G. P. 566,175. Filed July 9, 1926. Addn. to 463,531.

Bactericidal Compounds

Condense 2, 6-diaminopyridine or its derivatives with aliphatic aldehydes, e. g., formaldehyde, and an excess of formic acid. Schering-Kahlbaum A. G. G. P. 563,132. Filed May 14, 1931.

Therapeutic Compounds

Treat iodinated fatty acids having 18 carbon atoms in molecule with triethanolamine or its iodine derivatives to obtain water-soluble salts. C. A. Rojahn. G. P. 561,314. Filed June 13, 1930.

Salicylates

Treat salicylic acid with triethanolamine or its iodine derivatives in cold. Products are antirheumatics and antineuralgics. C. A. Rojahn. G. P. 561,523. Filed June 13, 1930.

Mercuric Compounds of Podophyllin

Technical podophyllin is dissolved in alcohol, add concentrated hydrochloric acid and treat solution with mercurous nitrate. Precipitate is filtered off and used as liver stimulant. Phys.-Chem. Lab. H. Rosenberg. G. P. 561,628. Filed Feb. 21, 1931.

Vitamin Preparations

Fatty material containing vitamins, lecithin and sterols is run slowly in thin stream into hot alcohol and alcoholic extract separated and evaporated to give vitamin preparation containing lecithin and sterols but of low fat content. A. G. f. Mediz. Produkte. G. P. 560,146. Filed Feb. 26, 1926.

Physiological Extracts

Aqueous alcoholic extracts containing sexual hormones, etc. are purified by re-extraction with petroleum ether. Schering-Kahlbaum A. G. G. P. 562,987. Filed Sept. 28, 1929. Addn. to 560,544.

Physiological Extracts

Extracts of female sexual hormones in organic solvents are purified by shaking with sulfuric acid of over 50% strength or hydrochloric acid of over 20% strength, removing acid layer after settling and finally distilling off organic solvent. F. Wadehn. G. P. 562,988. Filed May 30, 1928.

Hormones

Freshly pulped thymus gland is extracted with alcohol and extract evaporated in vacuo. Residue is treated with water and ether and water soluble portion separated from albumins. Residue is evaporated, leaving water-soluble product containing growth-promoting substance of hormone character in relatively pure form. S. A. Ind. Chem. Bale. G. P. 563,258. Filed July 20, 1930.

Hormones

Follicular fluid is mixed with acetone, precipitate removed, solution freed from acetone, concentrated, and concentrated solution again treated with acetone, filtered, and freed from acetone. Solution contains ovarial hormone. Chem. Pharm. A. G. Bad Homburg Werk. G. P. 563,473. Filed Sept. 19, 1928.

Pancreatic Hormones

Treat marketed pancreatic hormone hydrochloride with substances which form insoluble compound with hormone A. This is fractionally precipitated and converted to free hormone by means of hydrochloric acid. Hormone B remains in mother liquor and is separated by usual methods. C. Funk. G. P. 561,817. Filed Nov. 23, 1926.

Hormones

Growth promoting hormone, obtained in water-soluble form by extraction of thymus gland, is purified by precipitation from aqueous albumin-free solution with organic solvent, e. g. methyl or ethyl alcohol. S. A. Ind. Chim. Bale. G. P. 567,365. Filed Oct. 30, 1930.

Disinfectants

Disinfectant solutions comprising hypochlorite with or without alkali are improved by addition of water-glass solution. W. Weigert. G. P. 567,178. Filed Dec. 25, 1929.

MISCELLANEOUS PATENTS

Glucosides

Cardiotonic preparation from digitalis lanata obtained according to F. P. 712,282 is dissolved in organic solvent not miscible with water, e. g., mixture of methanol and chloroform, and is shaken with water. Each of three layers which forms contains principally one of three glucosides. Operation is repeated separately on each layer for purification. Chem. Fabr. Sandoz. F. P. 735,128. Filed Apr. 12, 1932.

Vitamin D

Vitamin D is preserved by exposing solution of ergosterol to ultraviolet light and adding oil or fat to solution before, during or immediately after irradiation. Process is carried out in absence of oxygen. N. V. Philips' Gloeilampenfabr. F. P. 737,234. Filed May 17, 1932.

Dentifrices

Sulfuric esters of higher fatty alcohols such as lauric or myristic alcohols are added to dentifrices as froth forming agents. Henckel & Cie. G.m.b.H. F. P. 737,220. Filed May 17, 1932.

Sulfonated Compounds

Technical oleic acids and olein are freed from solid fractions by cooling between −5° and +10° C. and sulfonated at moderate temperature with sulfuric acid or other sulfonating agents. Products are emulsifying, cleansing, dispersing and wetting agents. Fettsaure u. Glyz. Fabrik G.m.b.H. F. P. 734,876. Filed Apr. 8, 1932.

Perfumes, Cosmetics, etc.

Cyclohexylcyclohexanol or its derivatives or homologs are used as fixatives for volatile constituents of perfumes, cosmetics, soaps, etc. Howard & Sons, Ltd. F. P. 734,667. Filed Apr. 5, 1932.

Perfumes

Solutions of perfumes in water are obtained by first dissolving perfume in diethylene glycol or similar product and adding water. G. Harley. F. P. 735,784. July 30, 1931.

Disinfectants

Disinfectant is composed of mixture of adsorbent substance, such as activated charcoal, which contains elementary iodine or non-volatile iodine compound. J. P. Schoenthau. F. P. 734,494. Filed Apr. 1, 1932.

Disinfectant

Disinfectant and insecticide contains deodorized petroleum or white spirit 100 lit.; thymol 200 g.; camphor 150 g.; pyrethrum oil 400 c.c.; citronella oil 400 c.c.; oil of thyme 70 c.c.; oil mimosa 210 c.c.; oil origanum 100 c.c. J. M. L. Tabar-Nouval. F. P. 733,563. Filed Mar. 16, 1932.

Rheumatism Remedy

Boil until neutral a mixture of lithium hydroxide, unsaturated aliphatic acids, an ester-containing ethereal oil and alcohol. K. Sternberg. Aust. P. 130,798. Filed June 15, 1932.

Abstracts

Injury from Iodized Salt

A factor in 33% of 195 cases of hyperthyroidism was use of iodized salt or other iodine preparations. E. Herzfeld and A. Frieder. Munch. med. Wochschr. vol. 79, p. 2075-2076.

Bavarian Peppermint Oil

Illustrated article on culture and economic importance of peppermint-oil production in Bavaria and elsewhere. Composition and physical properties of tha Bavarian product are as follow: d_{15}0.9035; [d]d−24°50′; solubility in 70% alcohol 3.0; menthone 25.8%; ester number 13.4; saponification number 167.7; total menthol 54.7%. A. M. Burger Riechstoffind. vol. 7, p. 147-151.

Turbidity of Pepsin Wine

It is impossible to clarify pepsin wine with milk, protein or gelatin as these agents would precipitate most of pepsin. If tinned Seitz filter must be used, add pepsin after precipitation. Use of silver-plated filter is permissible since elementary silver does not cause turbidity. W. Brandrup. Pharm. Ztg. vol. 77, p. 1334.

Bioassay of Suprarenal Cortex

Different quantities of extract are injected into group of rats from which suprarenals had been removed 8 to 10 days previously, and then 8 mg. morphine hydrochloride per 100 g. body weight are injected into each rat. Minimum quantity of extract sufficient to prevent death is thus determined. R. H. de Meio and J. T. Lewis. Compt. rend. soc. biol. vol. 111, p. 822-824.

Mercurochrome and Iodine on Skin

Solutions containing 2, 3.5, or 7% iodine in alcohol applied to skin of rabbits show marked bactericidal action against Staph. aureus. Solutions containing 2, 3.5, or 7% mercurochrome in solvent composed of 35% water, 55% alcohol and 10% acetone are also satisfactory skin disinfectants. J. W. Smith, Jr. J. Urol. vol. 28, p. 485-501.

New Morphine Preparation

Morphine is made up as citrate solution for intravenous and subcutaneous injections. This gives more prompt relief of pain than other morphine solutions. H. Iacobaeus. Arch. Pharm. Chem. vol. 39, p. 625-633.

Codeine Determination

In separating antipyrine and phenacetin from codeine by shaking an acid aqueous solution with chloroform, as much as 15% codeine may be lost. E. Kallstrom. Svensk. Farm. Tids. vol. 36, p. 474-476.

Analysis of Cosmetic Creams

Modern face creams and skin foods are determined to large extent by chemical analysis for liability to rancidity, percentage of paraffin diluents, exact composition, etc. Details of routine analysis are given with application on sample as follows: water 10.2, glycerine 0.08, acid value 4.2, unsaponifiables 32.3, paraffin 19.9, insoluble saponifiables 18.5, iodine value of soluble saponifiables 69.3. These figures indicate 40-70% wax, freedom from rancidity indicating beeswax. Cacoa butter odor was absent and lanolin was indicated by feel and appearance so that specimen might be closely matched with paraffin 20, almond oil 20, beeswax 20, lanolin 30, water 10%. H. D. Murray. J. Soc. Chem. Ind. vol. 51, p. 393-394T.

Analysis of Opium

Methods of analysis of opium are reviewed and modification proposed. Complete details are given for determining morphine in opium or opium preparations. C. S. Rey. Quim. e. ind. vol. 9, p. 265-268.

Embelin as an Anthelmintic

Galenic preparation from dried fruit of Embelia ribes Burm. and Embelia robusta Roxb. contains about 2.5 to 2.8% of embelin, which is probably the active anthelmintic principle. Drug is effective against tapeworms, but not round worms or hookworms. Doses of 0.66 to 0.8 g. are non-toxic for dogs or men. A. S. Paranjpe and G. K. Gokhale. Arch. intern. pharmacodynamie vol. 42, p. 212-232.

Diuretic Action of Ammonium Bromide

Diuretic action of ammonium bromide was established in patients with edema. Doses of 5 to 10 g. are well tolerated. Combination with mercurials is extremely effective. F. C. Arrillaga and A. C. Taquini. Semana med. (Buenos Aires). 1932 II, p. 1951-1956.

Adulterated Lemon Extract

Expressed lemon oil differs in composition from sponge-extracted oil in that its citral content is lower, residue on evaporation is higher and content of stearoptene is also higher. Frequently, expressed oil is steam-distilled and citral and stearoptene collected as by-products are utilized in preparing false or adulterated sponge-extracted oil. Adulteration may be detected by measuring index of refraction of stearoptene, index of press-extracted essence being much lower than sponge-extracted essence. A 10% solution in terpene is used, index for solution ranging from 80.1 to 82.8 for sponge-extracted and 76.3 to 79.6 for pressed essence. (Wollny refractometer). G. Romeo, N. Galletti and J. Amoroso. Giorn. chim. ind. applicata. vol. 14, p. 397-400.

Guinea Oil of Geranium

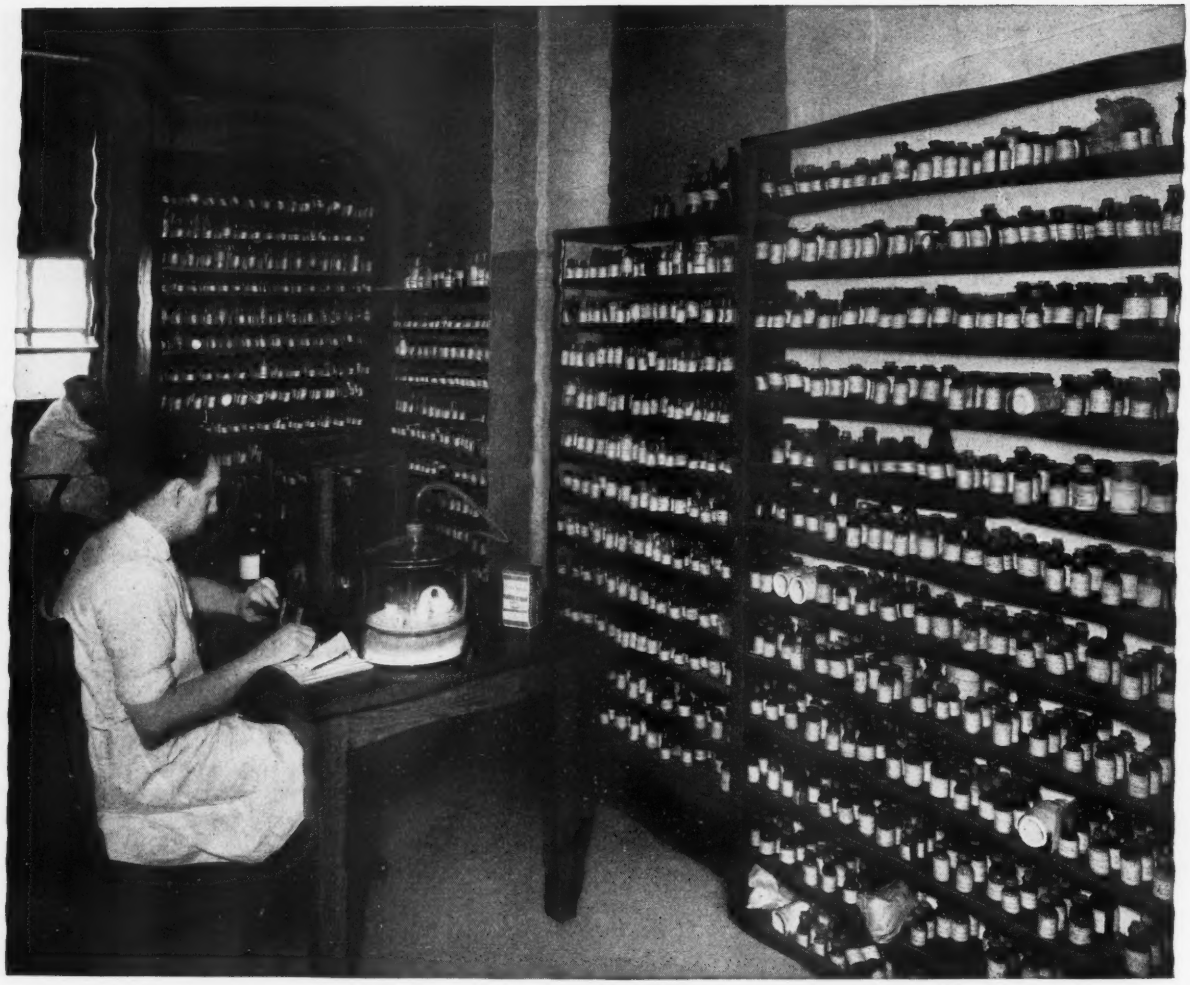
A product recently marketed as Guinea oil of geranium is an artificial product of poor quality with following characteristics: d_{15}0.9085; [d]$_{18}$−2°20′; n_{20} 1.4730; acid number 2.38; ester number 81.2; esters (as geranyl tiglate) 34.2%; ester number after hot formylation 136.5; apparent rhodinol—citronellol 40.8%; menthone 12.4%; insoluble in 68% alcohol; soluble in 0.8 volume 80% alcohol with turbidity above four volumes; soluble in 0.1 volume 90% alcohol with slight opalescence above eight volumes; soluble in 0.1 volume or more of 95% alcohol. Etabliss. Antoine Chiris. Parfums de France. vol. 10, p. 349.

Hordenine Silicotungstate

During determination of alkaloid, hordenine, author had opportunity of isolating hordenine silicotungstate. This is substance crystallizing in yellow needles with 2 molecules of water which it loses at 105° C.; it melts at 254 °C. Hordenine silicotungstate has definite composition because ratio of weight of silicotungstate of hordenine and residue is constant. Salt dehydrates first at 105° C. and can be calcined in platinum crucible at dull red heat. Hordenine may be recovered from silicotungstate in high state of purity. To accomplish this hordeinine silicotungstate is treated with 20% caustic soda. Reaction of hordenine with silicotungstic acid is very sensitive. Very distinct turbidity is obtained in cold with solutions of 1/4000 concentration. Reaction is best carried out in cold or in presence of sodium sulfate. M. Faudemat. Bulletin des Sciences Pharmacologiques, May 1932.

Alkaloids of Guarana

Study was made of distribution of alkaloids, caffeine and theobromine in various parts of plant, guanara. Seeds contained 3.91% of caffeine without trace of theobromine. Leaves contains both alkaloids, 0.38% caffeine and 1.20% of theobromine. Roots contained only 1.74% caffeine without any theobromine. Stems contained 0.17% caffeine and 0.98% theobromine. Inflorescences contained no caffeine and 1.50% theobromine. Presence of important quantity of theobromine along with caffeine in leaves of guarana deserves attention. Only caffeine is found in leaves of the tea plant, mate, coffee tree, etc. There must therefore be great difference in intensity of process of methylation of xanthine in leaves of guarana and in those of other species of caffeine plant. From physiological standpoint it is evident that leaves of guarana have different action on organism than seeds, and also leaves of tea plant and of mate. G. Bertrand. Bulletin des Sciences Pharmacologiques, May 1932.



Section of Control Laboratory in the New York Quinine and Chemical Works Plant

Manufacturers of

Bismuth Subcarbonate
Bismuth Subgallate
Bismuth Subnitrate
and other Bismuth Salts
Brucine Alkaloid
Brucine Sulphate
All Salts of
Cinchona Alkaloids

Codeine Alkaloid
Codeine Phosphate
Codeine Sulphate
Iodine Resublimed
Iodoform
Menthol-Y
Morphine Alkaloid
Morphine Sulphate

Opium Gum
(Gran. and Powd.)
Potassium Iodide
(Cryst. Gran. and Powd.)
Quinine Sulphate
and other Quinine Salts
Strychnine Alkaloid
Strychnine Sulphate
Thymol Iodide

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Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, *are indicated "second hand."*

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The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Acetanilid
Hypoquinone

Chemicals

Acetanilid, USP, 200 lb bbls..lb	.26	.27
Acetone, pure 350 lb drs wks..	.10	.11
Acetphenetidin, 225 lb bbls..lb.	1.20	1.25
ACID, *Acetylsalicylic, 225 lb* ..... bbls.	.70	.75
Agaric, 1 oz vials.....oz	...	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18
Benzoic, USP, 100 lb bbls.lb.	.48	.52
Boric, 300 lb bbls.....lb.	.07	.08
Cacodylic, 5 lb. bot.....lb.	...	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18
Cinnamic, 5 lb cans.....lb.	2.85	3.25
Citric, USP, crys 230 lb bbl lb	...	.29
USP, *crys imp.* 112 lb keg .....lb.	.34	.36
USP, powd 200 lb bbl...lb.	...	.31½
Gallic, USP, 150 lb bbls..lb.	...	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.59
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55
Hypophosphorous, USP, 30% .....lb.		
5 gal demis.....lb.	...	.75
Lactic, USP, VIII 100 lb cbys lb.....	.45	.47
USP, X 100 lb cbys.....lb.	.47	.49
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70
Salicylic, USP, 100 lb bbls.lb.	.40	.45
Stearic, double pressed, bags .....lb.	.08½	.09
Triple pressed, bags,...lb.	.11⅛	.12½
Succinic, 100 lb bbls.....lb.	...	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06
Tannic, USP, fluffy 50 lb bbls. .....lb.	.80	.83
Powd 200 lb bbls.....lb.	.70	.75
Tartaric, USP, 300 lb bbls.lb	.20	.20½
Aconitine, Alk, crys 1 oz vials .....oz.	...	29.00
Amorphous, 1 oz vials....oz.	...	17.00
Agaricin, 1 oz vis incl.....oz.	...	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.20	1.35
F. O. B. Works.....		
Ethyl, USP, 190 pf 54 gal drs.....gal.	...	2.535
Grain U. S. P. bbls...gal.	...	2.565
Pure tax free drums...gal.		
Ethyl.....	...	.445
Grain.....	...	.475
Denatured, (drums included) add 5c for bbls.		
No. 1 spec.....gal.	.335	.415
No. 5 comp.....gal.	.385	.465
23 a, spec.....gal.	.37	.49
39 b, spec.....gal.	.38	.50
40 m, spec.....gal.	.34	.46
Isopropyl refd 98-99% drs. incl.....gal.	.55	.60
Phenylethyl, 1 lb bot.....lb.	4.30	4.50
Aloin, USP, 100 lb cases...lb.	.72	.77
Aluminum Acetotartrate kegs .....lb.	...	1.60
Amidipyrine, 10 lb boxes....lb.	4.00	4.10
AMMONIUM, Acetate 100 lb kegs.....lb.	.26	.33
Benzoate, USP, 1 lb bot...lb.	...	1.27
Borate, 10 lb bot.....lb.	...	.35
Bromide, USP, 450 lb bbls.lb.	.35	.36
Carb, USP, lump 150 lb kegs .....lb.	...	.11
USP, powd 150 lb kegs..lb.	...	.12
Citrate, 100 lb kegs.....lb.	.90	1.30
Ichthyolate, as to brand..lb.	4.00	4.50
Iodide, USP, 25 lb jars...lb.	...	3.72
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20
Valerate, USP, 25 lb jars...lb.	2.75	2.90
Amylene Hydrate, 1 lb bot..lb.	...	7.10
Antipyrine, USP, 100 lb cans.lb.	2.00	2.50
Apomorphine Hydrochloride, ¼ oz. vials.....oz.	22.45	22.70
Arecoline Hydrobrom, 1 oz vials .....oz.	4.25	4.50
Aspidospermine Amorphous.oz.	...	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	5.00	5.25
Methyl bromide, 1 oz vials.oz.	...	25.00
Sulfate, 5 oz cans.....oz.	...	2.50
Single ounce.....oz.	...	3.00
Barbital, 1 lb. bot.....lb.	3.40	3.50
Barium Iodide, 5 lb box.....lb.	...	4.35
Sulfate, X-ray diagn bbls..lb.	.09½	.10
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80
Domestic syn. 50 gal bbl..gal.	.70	.75
St. Thomas, 50 gal bbls...gal.	.80	.90
Benzocaine 25 lb. lots.....		
1 lb.l ots.....lb.	5.00	5.75
Benzonaphthol, 5 lb boxes..lb.	2.50	2.60
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35
Formate, 1 lb bot.....lb.	3.25	3.50
Succinate, 160 lb cby.....lb.	...	5.25
BISMUTH, metal 100 lb cases .....lb.	...	.90
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.10
Betanaphtholate, 5 lb box.lb.	...	2.90
Citrate, USP, 5 lb cans....lb.	...	2.45
Chloride.....lb.	...	2.35
Hydroxide.....lb.	...	2.65
Nitrate, 25 lb jars.....lb.	...	.95
Oxide anhydrous.....lb.	...	3.05
Oxychloride, 25 lb boxes...lb.	...	2.60
Salicylate, 25 lb boxes...lb.	...	1.55
Subcarbonate, USP, 25 lb boxes.....lb.	1.25	1.30
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.20	2.27
Subgallate, USP, 25 lb boxes .....lb.	1.35	1.40
Subiodide, 5 lb lots.....lb.	...	3.40
Subnitrate, USP, 25 lb jar.lb.	.95	1.00
Subsalicylate, USP, 25 lb boxes.....lb.	2.15	2.20
Tannate.....lb.	...	2.15
Borax, crys USP, 400 lb bbls.lb.	...	.04½
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90
Butylchloral Hydrate bot....lb.	4.00	5.00
Cadmium iodide, 10 lb bot...lb.	...	3.65
CAFFEINE Alk, USP, 1.....		
100 lb kegs.....lb.	1.95	2.00
Citrated, 50 lb cans.....lb	1.55	1.60
Hydrobromide, 1 lb bot...lb	4.80	5.00
Hydrochloride, 1 lb bot...lb	6.05	6.55
Sulfate, 1 lb bot.....lb.	5.40	5.90
Sodium Benzoate, tins....lb.	...	3.05
Salicylate, tins.....lb.	...	2.95
Calcium Bromide, 100 lb cs..lb.	...	.60
Carb, USP, 175 lb bbls....lb.	.05	.06
Gluconate, Gran. 125 lb..... bbls.....lb.	.47	.52
Powd.....lb.	.47	.52
Glycerophos, 250 lb bbls...lb.	...	1.05
Hypophos, USP, 25 lb cans lb.	.55	.60
Iodide, 5 lb bot.....lb.	...	3.75
Lactate, USP, 500 lb bbls lb.	.35	.40
Lactophosphate Soluble...lb.	...	1.20
Powdered tins.....lb	...	1.00
Insol, powd tins.....lb.	...	.50
Phosphate & Sulfate Tooth Paste grade, Works..lbs.	.03	.06
Sulfide, USP, 100 lb drs...lb.	.21½	.24
CAMPHOR, *Jap. ref. slabs 100* lb. cases.....lb.	.42	.43
Refined powd.....lb.	.43	.44
½ oz tab, 100 lb cases....lb.	.47	.48
Liniment, bbls.....gal.	2.10	2.20
Monobrom, 100 lb cases...lb.	1.60	1.65
Casein edible, 100 lb kegs...lb.	.45	.55
Charcoal Animal medicinal jars incl.....lb.	...	.50
Charcoal Wood, powd, 100 lb bbls.....lb.	.06	.07
Chloral Hydrate, USP, 25 lb jars.....lb.	.75	.77
100 lb drums.....lb.	.70	.75
Cholesterin.....lb.	11.00	17.00
Chloroform, USP, 50 lb drs...lb.	.25	.27
Chlorophyll, 1 lb. bot.....lb.	3.75	4.00
Chromium Sulfate Scales, tins .....lb.	.45	.50
Powdered tins.....lb.	.50	.55
Chrysarobin, 50 lb tins.....lb.	2.50	2.55
Cinchonine Alk, 100 oz tins.oz.		
Crystal.....oz.	.38	.40
Sulfate, 100 oz tins.....oz.	.24	.26
Cinchonidine Sulfate, 100 oz tins .....oz.	.33	.35
Cinchophen, *U.S.P. kegs*...lb.	2.75	3.25
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07
Hydrochloride, USP,.....oz.	...	8.50
CODEINE *Alk, 1 oz vials, 10* lots.....oz.	...	10.52
Hydrobromide.....oz.	...	8.92
Hydrochloride.....oz.	...	9.52
Nitrate, oz vl 10 oz lots....oz.	...	9.80
Phosp. oz vl, 10 oz lots....oz.	...	7.92
Salicylate.....oz.	...	8.25
Sulfate, oz vl, 10 oz lots...oz.	...	8.42
Colchicine Alk, USP, 1 oz vl.oz.	...	22.00
Salicylate, 1 oz vls.....oz.	...	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.14¾	.15½
Imp. powd. 224 lb bbls....lb.	.17½	.17¾
Creosote, USP, 42 lb cbys....lb.	.45	.47
Carbonate, 150 lb.....lb.	1.40	1.75
Cresol, USP, 400 lb drums...lb.	...	.18
500 lb drums.....lb.	.12	.15
DIGITALIN Pure, 1 oz vial..oz	15.00	15.50
Dover's Powder, USP, 5 lb tin .....lb.	2.75	2.80
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00
Emetine Alk, 15 gr vial.....oz.	...	.85
Hydrochloride, USP, 1 oz vl .....oz.	11.00	11.25
15 grain vials.....oz.	2.50	2.70
Ephedrine, alk. 25 oz. tins,..oz.	1.50	1.90
Hydrochloride, 25 oz. tins, oz.	1.30	1.65
Sulfate, 25 oz. tins.....oz.	1.30	1.65
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50
Imp. 100 lb bbls.....100 lb.	2.30	2.35
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00
Eserine Alk, 1 oz vials.....oz	...	50.00
Salicylate, 1 oz vials.....oz.	...	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	...	40.00
ETHER, USP, 55 lb drums..lb.	...	.11
Anaesthesia, 55 lb drums..lb.	.21	.23
Nitrous, 1 lb bot.....lb.	.75	.77
Ethyl Chloride, 200 lb bot...lb.	.22	.24
Ethyl Iodide, 5 lb bot.....lb.	6.00	6.05
Formaldehyde, USP, 100 lb cbys lc-l wks.....lb.	.07	.07½
Gall Extract.....lb.	.20	.21
GLANDULAR SUBSTANCES 1 lb. lots		
Duodenal Substance.....	...	3.75
Liver Extract 1-20	...	5.75
Orchic Substance (Testicular)	...	3.75
Ovarian Substance, whole ..	...	12.50
Ovarian Residue.....	...	10.00
Pituitary Substance, whole..	...	45.00
Pituitary Substance, Anter-*ior Lobe*.....	...	40.00
Thyroid, U. S. P.....	...	3.75
Oxgall Powder.....	...	1.25
GLYCERIN, CP, 550 lb drums .....lb.	...	.10½
Gold Chloride, bottles.....oz.	12.00	12.50
Guaiacol, liq. USP. 100 lb. cbys.....lb	1.60	1.70
Crystals.....lb	2.25	2.50
Benzoate, 1 lb bottles.....lb.	...	3.00
Carbonate, 5 lb boxes.....lb.	1.75	1.80
Halazone, 5 lb bot.....lb.	2.75	3.25
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47
Homatropine Hydrobrom USP .....oz.	...	14.50
5 oz and 1 oz vials.....oz.	...	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00
Sulfate, 1 oz vial.....oz.	22.50	23.00
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.	...	40.00
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	.03½	.04½
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	...	35.00
5 oz, 1 oz vials.....oz.	13.07	13.57
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	25.07
Amorphous, 1 oz vial...oz.	...	75.07
Hydrobromide, USP 1 oz vial .....oz.	...	25.00
Sulfate, 1 oz vial.....oz.	...	25.07
Hypoquinone, 100 lb kegs...lb.	...	1.10
ICHTHYOL, tins.....lb.	4.00	4.25
Iodide Arsenous, 5 lb bot...lb.	...	5.20

Chemicals

Arsenous-Mercuric soln, 5 lb bot....lb	...	.26
Iodine, crude, 200 lb kegs...lb.	...	1.95
Resublimed, 25 lb jars....lb.	...	2.65
Tincture bbls.....gal.	...	2.55
Iodoform, powd 10 lb bot...lb.	...	5.20
Iron & Ammonium Citrate, USP, 50 lb cans.....lb.	.42	.44
Chloride, USP, lump 400 lb bbls.....lb.	.06	.08
Citrate, USP, VIII 25 lb can .....lb.	.94	.99
Hypophosphite, 5 lb cans..lb.	1.40	1.50
Iodide, 1 lb bottles.....lb.	...	3.00
Phosphate, USP, 50 lb cans .....lb.	...	.69
& Potas Oxalate, 250 lb bbl .....lb.	...	.45
Pyrophosphate, USP, 50 lb .....lb.	.74	.80
& Sod Oxalate, 50 lb. cans.lb.	...	.30½
Sulfate, USP, crys bbls....lb.	.04	.04½
Ferrous dried bbls.....lb.	...	.08
Valerate, tins.....lb.	2.75	3.00
Jalap Resin, USP lumps, 5 lb tins.....lb.	...	4.00
Powdered, tins.....lb.	...	4.65
Lanolin, hyd 350 lb. bbls....lb.	.13	.15
Anhydrous, 350 lb. bbls...lb.	.14	.16
Lead Acetate, USP, 100 lb kegs .....lb.	.16½	.19½
Iodide, USP, VIII 5 lb bot.lb.	...	2.55
Lecithin, 5 oz. jars.....oz.	1.00	1.30
Vegetable, cans.....lb.	1.00	2.50
Licorice Ext Mass, cases....lb.	.19	.20
Compound powder, bbls...lb.	.11	.13
LITHIUM CARBONATE, 250 lb bbls.....lb.	1.25	1.35
Citrate, USP, 100 lb kegs..lb.	...	1.40
Iodide, 5 lb bottles.....lb.	...	4.60
Lobeline Sulfate, ¼ oz vial..oz.	...	8.75
Magnesium Carbonate, USP, 100 lb bbls.....lb.	.08	.09
English, oz blocks.....oz.	.16	.18
Glycerophosphate, 5 lb tins.lb.	3.20	3.25
Hypophosphite, 5 lb cans..lb.	1.10	1.15
Oxide, 100 lb. cases.....lb	.35	.45
Salicylate, 100 lb kegs.....lb	...	1.10
Stearate, bbls.....lb.	.18	.20
Manganese Glycerophosphate, 5 lb tins.....lb.	2.90	3.00
Hypophosphite, USP, VIII 5 lb cans.....lb.	1.35	1.40
Iodide, 1 lb bottles.....lb.	...	5.35
MENTHOL, USP, 60 lb cases .....lb.	3.00	3.20
Synthetic, cases.....lb.	2.50	2.75
Mercury Metal, 75 lb flasks...fl.	56.50	58.00
Bichloride, crys 25 lb box..lb.	...	.82
Gran powd, 100 lb kegs..lb.	...	.67
Bisulfate, 25 lb boxes.....lb.	...	1.48
Blue Mass, 25 lb boxes....lb.	...	.84
Powd, 25 lb boxes.....lb.	...	.85
Blue Ointment, USP, 50%, 25 lb cans.....lb.	...	.91
Mild 30%, 25 lb cans....lb.	...	.64
33 1/3% mercury.....lb.	...	.67
Calomel, 50 lb boxes.....lb.	...	1.15
English.....lb.	2.65	2.75
Iodide, green, 25 lb jars....lb.	...	3.95
Red, USP, 25 lb jars...lb.	...	3.55
Yellow, USP, VIII, 25 lb jars.....lb.	...	3.65
Red precip.Powd.USP, 25 lb. boxes.....lb.	...	1.24
White precip, Powd., USP, 25 lb. boxes.....lb.	...	1.31
Salicylate, 25 lb bot.....lb.	...	2.32
With chalk, USP, 25 lb boxes .....lb.	...	.69
Methanol, Pure 1c-1 drs....gal	...	.44
Methyl Salicylate, USP, 50 lb cans.....lb.	.40	.42
Methylene Blue, USP, med 5 lb cans.....lb	2.00	2.05
Milk powd, 150 lb bbls.....lb.	.09	.12
MORPHINE Alk, 5 oz tin...oz.	10.90	10.95
Acetate, 5 oz tins.....oz.	8.75	8.80
Hydrobromide, 5 oz tins, 10 oz lots.....oz.	8.75	8.80
Hydrochloride, 5 oz tins, 10 oz lots.....oz.	8.75	8.80
Ethyl Hydrochloride, 5 oz tins 10 oz lots.....oz.	...	10.85
Sulfate, 5 oz tins, 10 oz lots oz.	7.85	8.00
Naphthalene Flake, 175 lb bbls wks.....lb.	.04½	.05
Balls, 250 lb bbls wks.....lb.	.05½	.06
Neo-cinchophen 5 lb. lots..... 1 lb. lots.....lb.	15.00	18.00
Oxgall, Purified, 5 lb bot....lb.	2.00	2.50
USP Extract, 5 lb. bot.....lb.	1.80	1.90
Oxyquinoline Sulfate, tins...lb.	5.00	5.75
Pancreatin, USP, 100 lb....lb.	...	1.90
Paraffin, refd, 200 lb cs slabs 118 -120 deg MP.....lb.	.08	.09
128-132 deg MP.....lb.	.07½	.07¾
Para-Aldehyde, USP, 100 lb. carboys.....lb.	.48	.50
Pepsin, USP, 100 lbs. 1:3000.lb.	...	2.25
100 lbs. 1:6000.....lb.	...	4.00
100 lbs. 1:10000.....lb.	...	6.50
Peptone, powd., or granular 5 lb. 100 lb. lots.....lb.	.70	1.00
100 lb. lots.....lb.	...	6.50
Phenolphthalein, U. S. P..... 100 lb drums.....lb.	...	.52
5 lb cans 100 lb lots...lb.	...	.60
Yellow.....	...	.47
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots .....oz.	...	3.25
Nitrate, 25 oz lots.....oz.	...	3.25
Single ounce.....oz.	...	3.50
Alkaloid, 15 gr vials.....vl.	...	.75
Piperadine, 25 oz bottles.....lb.	...	8.00
Popodhyllin 5 lb bottles.....lb.	4.00	4.15
Potassium Acetate, USP, 100 lb kegs.....lb.	.29	.30
Bicarb, USP, crys 320 lb bbls .....lb.	.09½	.10
Bromide, USP, crys 100 lb cs .....lb.	.31	.32
Citrate, USP, 100 lb. box..lb.	.42½	.43
Guaiacol Sulfonate.....ib.	1.95	2.25
Potassium Hypophosphite, 10 lb. cans.....lb.	.65	.70
Iodide, USP, 25 lb cases...lb.	...	2.15
Lactophosphate, 4 oz bot...lb.	...	.90
Permangan, USP, crys, 100 lb drs wks.....lb.	.16	.16½
Phosphate dibasic pure, kegs .....lb.	...	.49
Salicylate, 25 lb cans.....lb.	...	1.18
Sulfate, USP, VIII, 100 lb kegs.....lb.	.13	.15
Sulfocyanide, CP 15 lb jars lb.	...	.50
Tartrate, CP, tins.....lb.	...	.65
Pyrogallol, USP, see Acid Pyro-gallic.....	...	...
Quinidine Alk, crystals, 100 oz. tins.....oz.	.68	.74
Sulfate, 100 oz tins.....oz.	...	.48
QUININE SULFATE, USP, 100 oz tins.....oz.	...	.36
1 oz tins, 100 oz lots....oz.	...	.46
Acetate.....oz.	...	.78
Arsenate.....oz.	...	.78
Benzoate.....oz.	...	.78
Bisulfate, USP.....oz.	...	.36
Citrate.....oz.	...	.51
Dihydrobromide.....oz.	...	.54
Dihydrochloride, USP....oz.	...	.51
Ethyl Carbonate.....oz.	...	.50
Ferrocyanide.....oz.	...	.78
Formate.....oz.	...	.73
Glycerophosphate.....oz.	...	.95
Hydrobromide, USP.....oz.	...	.46
Hydrochlorosulfate.....oz.	...	.51
Hypophosphite.....oz.	...	.70
Lactate.....oz.	...	.65
Phenolsulfonate.....oz.	...	.62
Phosphate.....oz.	...	.52
Salicylate, USP.....oz.	...	.41
Tannate, USP.....oz.	...	.78
Tartrate.....oz.	...	.57
Valerate.....oz.	...	.51
Urea Hydrochloride, USP.. .....oz.	...	.50
Rennet, N. F. 5 lb 1:25,000...lb.	2.95	3.50
Resorcinol, USP, 25 lb cans..lb.	1.57	1.65
Rochelle Salt, USP, 225 lb bbl .....lb.	.11½	.12
Rock Sugar, 5 lb boxes.....lb.	...	.15
Saccharin, USP, 10 lb cans...lb.	1.70	1.80
USP, Soluble, 10 lb cans...lb.	1.75	1.85
Salicin, USP.....lb.	...	12.50
SALOL, USP, 100 lb drums..lb.	...	.90
Saltpetre, powd, bbls wks....lb.	.06½	.08¼
Santonin, USP, bulk.....lb.	.60	.65
Saponin, refined.....lb.	1.30	1.50
Seidlitz Mixture, 250 lb bb..lb.	.10	.10½
Silver Metal, American.....oz.	...	.29½
Iodide, 16 oz lots.....oz.	...	.69
Nitrate, 100 oz bottles....oz.	.23½	.25½
Nucleinate, bulk.....oz.	...	.37
Proteinate.....oz.	.39	.41
SODIUM BENZOATE, USP, 100 lb bbls.....lb.	.42	.47
Bromide, USP, 100 lb kegs.lb.	.31	.32
Cacodylate, USP, 25 lb bot .....lb.	4.75	5.90
Citrate, USP, X100 lb. box.lb.	...	.31½
USP VIII, 100 lb. box..lb.	...	.25
Glycerophosphate, N.F., crys 25 lb cans.....lb.	1.27	1.33
Powder, 25 lb tins.....lb.	1.32	1.38
Soln, USP, 25 lb tins...lb.	1.05	1.15
Hypophosphite, USP, 25 lb cans.....lb.	.60	.65
Iodide, USP, 25 lb jars...lb.	...	2.75
Phosphate (Mono-Sodium), 100 lb kegs.....lb.	.28	.29
Di-Sodium USP, granular, 275 lb bbls.....lb.	.07½	.08
Pyrophosphate, 100 lb kegs .....lb.	...	.29
Salicylate, 100 lb kegs....lb.	...	.47
Sulfocarbolate, USP, 100 lb kegs.....lb.	...	.25
Sulfocyanate, CP crys, jars included.....lb.	...	.60
Spartein Sulfate, USP, 25 oz bulk.....oz.	.65	.70
Single oz vial.....oz.	.77	.90
STRONTIUM BROMIDE USP, 50 lb kegs.....lb.	.46	.47
Carb, 100 lb kegs wks....lb.	...	.20
Iodide, USP, 25 lb jars....lb.	...	3.00
Lactate, kegs.....lb.	.90	1.10
Nitrate, 600 lb bbls NY...lb.	.08	.08½
Imp. bbls NY.....lb.	.08	.08½
Salicylate, USP, 100 lb keg lb.	...	1.10
Strophanthin, USP, 1 oz vial.oz.	19.00	19.00
Crystals.....lb.	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins.....oz.	...	.37
Powdered.....oz.	...	.27
Acetate.....oz.	...	.65
Arsenate, 25 oz cans.....oz.	...	.65
Glycerophosphite, USP....oz.	...	.65
Hydrobromide..... .....oz.	...	.65
Hydrochloride.....oz.	...	.65
Hypophosphite.....oz.	...	.75
Nitrate, USP.....oz.	...	.60
Phosphate.....oz.	...	.65
Sulfate, USP, powd .....oz.	...	.24
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90
Milk, USP, 200 lb bbls...lb.	.18	.20
Sulfonethylmethane, USP, 10 lb boxes.....lb.	3.85	4.05
Sulonmethane, USP, 10 lb box .....lb.	2.65	3.85
Sulfur flwrs. washed, USP, 125 lb bbl.....lb.	...	.06
Iodide, USP, VIII, 5 lb bot lb.	...	3.85
TARTAR EMETIC, USP, 300 lb bbls.....lb.	.26	.28
Terebene, tins.....lb.	...	.85
Terpin Hydrate, USP, 100 lb kegs.....lb.	.30	.32
Theobromine Alk, 5 lb cans..lb.	1.60	1.80
Sod. Salicylate, 1 lb bot...lb.	...	1.85
Sod. Benzoate, 1 oz vials..oz.	...	1.00
Thymol, USP, 25 lb tins.....lb.	1.15	1.40
Iodide kegs.....lb.	...	3.80
Titanium Oxide, tons, bags, lb.	...	.18
100 lb. kegs.....lb.	...	.19½
Veratrine Alkaloid.....oz.	...	2.25
Sulfate, 1 oz vials.....oz.	...	2.25
Witch Hazel Ext., 50 gal bbl .....gal.	.60	.80
Zinc Carb, USP, 100 lb keg..lb.	.28	.31
Chloride, USP, 25 jars ex..lb.	.24	.29
Iodide, 5 lb bottles.....lb.	...	4.25
Oxide, USP, 100 lb bbls...lb.	.13	.14
Stearate, USP, 50 lb bbl..lb.	.15	.17
Sulfate, USP, 100 lb bbl..lb.	.08	.09
Sulfocarbolate, 100 lb kegs..lb.	.23	.26

Miscellaneous

Absorption Bases.....lb.	.60	.75
Castor Oil, odorless, bbls.....lb.	...	.12
Chalk drop, 175 lb. bbls.....lb.	...	.03½
Precip. light, 250 lb. cask..lb.	...	.04½
Heavy 540 lb. casks.....lb.	...	.04½
English light, bags.....lb.	...	.04½
English light. casks.....lb.	.05½	...
Cocoa Butter, fingers..... 12 lb. box.....lb.	.24	.25
Cod Liver Oil Nor. 30 gal. bbls	21.00	23.00
Newfoundland.....bbl.	21.00	22.00
Collodion U. S. P. 30 lb. dr...lb.	.13	.14
Colors certified; 1 lb. cans, 5 lb. cans		
Amaranth No. 107.....lb.	2.55	2.65
Brilliant Blue F.C.F.....lb.	13.00	13.50
Erythrosine No. 517.....lb.	17.00	17.50
Orange Ind. 85.....lb.	2.55	2.65
Ponceau 3R No. 56.....lb.	5.25	5.50
Tartrazine No. 94.....lb.	2.55	2.65
Corn Syrup 42° 50 gal. bbl. .....100 lb.	...	2.28
Gelatin, USP, Silver 100 lb. cases.....lb.	.49	.55
Pure Food, 50 lb. bbl.....lb.	.47	.49
Glucose, (grape sugar) dry 70° bags c-1 NY.....100 lb.	3.14	3.24
Haarlem Oil, bot 6 gross cases .....gross	...	3.25
Imported, 5 gr. cs.....gross	...	3.35
Kaolin, Bags.....lb.	.05	.08
Colloidal Grade 200 lb. tin lined wooden drums....lb.	.10½	.12
Mineral Oil White, 50 gal. bbls.		
80-85 vis.....gal.	.45	.50
85-90 vis.....gal.	.65	.70
125-130 vis.....gal.	.75	.85
290 vis.....gal.	.80	.90
Russian 80-85 vis.....gal.	.55	.60
110-115 vis.....gal.	.70	.75
145-155 vis.....gal.	.73	.78
180-185 vis.....gal.	.78	.83
335-345 vis.....gal.	.83	.88
Olive Oil, Edible bbls.....gal.	1.45	1.65
Paraffin Wax, fully refined, slabs		
125 @ 127 A.M.P. bags lb.	...	.03½
130 @ 132 A.M.P. bags lb.	...	.04
135 @ 137 A.M.P bags lb.	...	.04¼
Petrolatum, Lily White, USP. 400 lb. bbl.....lb.	.07	.08
Snow White USP, 400 lb. bbls.....lb.	.08	.09
Rice Starch, 140 lb bags....lb.	.08	.09
Soap Castile, bars 40 lb. Case .....Cs.	...	12.75
Powd. USP 250 lb. bbls...lb.	.21	.23
Green, USP, 450 lb. bbls...lb.	.07½	.07½
Neutral, powd. 200 lb. bbls.lb.	.18	.20
Talc, Italian, 220 lb bags...ton.	55.00	75.00
French, 220 lb bags.....ton.	40.00	45.00
Turtle Oil, gal.....	3.50	5.00

Waxes, See Drugs & Spices

Acetophenene, CP, 1 lb bot..lb.	3.50	3.65
Aldehyde, C 8 (Otcyl) 1 lb bot ..lb.	30.00	35.00
C 7, 1 lb bot..lb.	4.50	5.50
C 9 (Nonyl), 1 lb bot ....lb.	40.00	45.00
C 10 (Decyl), 1 lb bot....lb.	30.00	35.00
C 14, 1 lb bot..lb.	12.00	14.00
C 16, 1 lb bot..lb.	16.00	18.00
AMYL ACETATE, pure, 25 lb cans..lb.	.43	.50
Butyrate, 1 lb bot..lb.	.95	1.50
Butyrate, 5 lb bot..lb.	...	1.00
Cinnamate, 5 lb bot..lb.	9.50	9.75
Formate, 1 lb bot..lb.	...	1.75
Formate, 5 lb bot..lb.	...	1.60
Phenyl Acetate, 1 lb bot...lb.	4.50	5.00
Salicylate, 100 lb cbys.....lb.	.65	1.25
Anethol, 2 lb bot..lb.	.90	1.05
Anisic Aldehyde, 1 lb bot....lb.	3.10	3.60
Benzaldehyde, USP, 40 lb cbys ..lb.	1.30	1.40
FFC, 40 lb cbys.....lb.	1.35	1.45
Benzoic Ether, see Ethyl Benzoate.....		
Benzophenone, 1 lb bot.....lb.	1.75	2.25
Benzyl Acetate, 100 lb cbys..lb.	.60	.80
Alcohol, 5 lb bot..lb.	.85	.95
BENZYL BENZOATE.....	1.10	1.15
Medicinal, FFC.....lb.	...	1.40
Buytrate, CP, 1 lb bot....lb.	9.25	9.50
Benzyl Cinnamate, 1 lb bot. lb.	7.00	7.25
Formate, 1 lb bot..lb.	3.15	3.25
Propionate, 1 lb bot.....lb.	2.25	2.40
Succinate, 1 lb bot.....lb.	5.25	5.50
Valerate, 5 lb bot.....lb.	3.00	3.25
Borneol, 1 lb bot.....lb.	1.35	1.85
Bornyl Acetate, 1 lb bot....lb.	1.50	2.60
Bromstyrol, 25 lb cases....lb.	3.75	3.85
Butyl Anthranilate dom, 1 lb bot..lb.		
Carvol, 5 lb bot..lb.	3.00	3.40
Cinnamic Acid, 5 lb cans....lb.	3.25	3.50
Alcohol liquid, 1 lb bot...lb.	2.50	2.60
Crystallizable.....lb.	3.50	4.00
Aldehyde.....lb.	2.25	2.50
Imported, 1 lb bot.....lb.	7.75	9.00
Citral, 25 lb cans.....lb.	1.65	3.00
Citronellol 1 lb bot.....lb.	2.00	2.25
Citronelyl Acetate, 1 lb bot..lb.	3.50	3.75
Coumarin, 25 lb cans.....lb.	3.25	3.50
DECYL ALCOHOL.....lb.	22.00	25.00
Diphenyloxide, 25 lb tins....lb.	1.05	1.20
Diphenyl Methane.....lb.	1.75	2.00
Duodecyl Alcohol.....lb.	24.00	26.00
Ethyl Acetate, pure, 5 lb bot..lb.	.05½	.06½
Benzoate, 5 lb bot.....lb.	1.25	1.50
Ethyl Butyrate, 5 lb bot....lb.	1.80	2.00
Caproate, 1 lb bot.....lb.	3.25	3.50
Cinnamate, 1 lb bot.....lb.	4.00	4.50
Formate, 5 lb bot.....lb.	1.00	1.25
Methyl Paracresol, 1 lb bot ..lb.	3.25	3.50
Phenyl Acetate, 5 lb bot..lb.	3.75	4.00
Valerate, 5 lb bot.....lb.	...	3.75
Salicylate, 5 lb bot.....lb.	1.95	2.00
Eucalyptol, USP, 50 lb cans..lb.	.57	.60
Eugenol, USP, 25 lb cans....lb.	2.00	2.50
Geraniol, 50 lb cases.....lb.	1.75	2.35
Geranyl Acetate, 1 lb bot....lb.	2.75	2.80
Butyrate, 1 lb bot.....lb.	13.00	13.50
Formate, 1 lb bot.....lb.	12.00	12.50
Heliotropin, 100-10 lbs.....lb.	1.65	1.75
Imported.....lb.	1.95	2.05
Hydroxycitronellal, 1 lb.....lb.	2.75	3.85
Indol, CP, 1 oz bot.....oz.	2.90	3.00
IONONE, 1 lb bot 100%...lb.	4.00	4.50
Alpha.....lb.	5.75	6.00
Beta.....lb.	4.50	5.00
Methyl.....lb.	5.00	5.25
Iso Borneol.....lb.	2.25	2.35
Iso Bornyl Acetate.....lb.	3.00	3.20
Iso-Butyl Benzoate, 5 lb bot..lb.	2.75	3.00
Iso-Eugenol, 1 lb bot.....lb.	2.85	2.90
Iso-Safrol, 1 lb bot imp.....lb.	1.75	1.85
Domestic, 5 lb bot.....lb.	3.50	3.75
Linalol from Bois de Rose, 5 lb bot.....lb.	1.65	3.50
Linalyl Acetate, 1 lb bot....lb.	2.25	2.35
Benzoate, 1 lb bot.....lb.	13.00	14.00
Formate, 5 lb bot.....lb.	10.50	12.00
METHYL ACETOPHENONE .....lb.	2.00	2.15
Anthranilate, 1 lb bot.....lb.	2.10	2.20
Imported.....lb.	2.70	2.75
Benzoate, 5 lb bot imp....lb.	1.25	1.35
Domestic, 5 lb bot.....lb.	1.25	1.35
Cinnamate, 1 lb bot.....lb.	3.35	3.85
Heptenone, 1 lb bot.....lb	3.50	4.00
Paracresol, 1 lb bot.....lb	4.50	8.00
Phenylacetate, 5 lb bot...lb	2.50	2.75
Salicylate, USP, 500 lb dr .lb.	...	.40
50 lb cases.....lb.	...	.42
Mirbane rect. 1,000 lb drs...lb.	.12	.13
Musk Ambrette 1 lb cans...lb	6.00	6.25
Ketone 1 lb cans.....lb	7.55	7.80
Xylene 5 lb cans.....lb.	2.25	2.85
Nerolin 1 lb cans.....lb.	1.35	1.40
Octyl Alcohol 1 lb bot.....lb.	18.00	20.00
Oenanthic Ether lb bot.....lb.	1.90	2.00
Oleoresin Aspidum.....		
USP, bot and tins.....lb.	...	1.25
Capsicum, USP, bot and tins .....lb.	1.90	2.15
Cubeb, USP, bot and tins..lb.	2.30	2.60
Ginger bot and tins.....lb.	1.80	1.90
Malefern see Aspidum.....		
Orris, bot & tins.....lb.	12.00	15.00
Pepper, black, USP, bot & tin .....lb.	...	9.50
Vanilla, bot & tins.....lb.	3.80	4.00
Paracresol Methyl Ether....lb.	4.25	4.50
Paracresyl Acetate.....lb.	5.50	5.75
Para Cymene Refd 110 gal dr .....gal.	2.25	2.50
PHENYLACETALDEHYDE 50% 1 lb bot.....lb.	4.50	4.75
Imported 50%.....lb.	4.50	4.75
100%.....lb.	8.00	8.25
Phenylacetic Acid 1 lb bot..lb.	2.65	2.90
Phenyl Diacetate 1 oz bot...oz.	3.00	3.25
1 lb bot.....lb.	8.00	10.00
Imported.....lb.	7.00	7.75
Phenylethyl Alcohol 1 lb bot.lb.	3.75	4.00
Phenyl Ethyl Acetate.....lb.	8.25	8.75
Butyrate 1 lb bot.....lb.	15.00	16.00
Formate, 1 lb bot.....lb.	19.00	21.00
Propionate, 1 lb bot.....lb.	10.00	12.00
Valerate, 1 lb bot.....lb.	14.00	15.00
Phenylpropylalcohol, 1 lb bot .....lb.	8.50	9.00
Rhodinol, 1 lb bot.....lb.	12.00	15.00
Skatol, 1 oz bot.....lb.	4.50	7.00
Terpinyl Acetate, 25 lb cans..lb.	.85	.90
Imported, 25 lb cans.....	.85	.90
TERPINEOL, CP, 1000 lb drs .....lb.	.29	.30
50 lb cans.....lb.	.31	.33
Absolute, 25 lb cans.....lb.	.48	.50
TOLYL ALDEHYDE, F.F.C. 40 lb. carboys.....lb	2.10	2.25
Valerianic Ether see Ethyl Valerate.....		
Vanillin (Clove Oil), USP.lb.	4.50	4.75
(Guaiacol) USP.....lb.	4.25	4.50

Essential Oils

Almond Bitter, USP, 5 lb bot lb.	2.00	2.10
Bitter, ffPA, 5 lb bot.....lb.	2.10	2.20
Sweet, 56 lb cans.....lb.	.47	.53
Almond Meal, 25 lb cans....lb.	.18	.19
Amber crude, 25 lb tins....lb.	.16	.18
Rectified, 25 lb tins.....lb.	.50	.53
Amber liquid, 400 lb drs....lb.	2.20	2.30
Ambergris, Black, boxes.....oz.	14.00	15.00
Gray boxes.....oz.	25.00	30.00
Angelica Root, 1 lb bot.....lb.	19.00	29.00
Anise Tech, 400 lb drums...lb.	.32	.35
USP, 60 lb cans.....lb.	.34	.37
Apricot Kernel, 50 lb cans...lb.	.22	.23
Bay, 25 lb tins N. F. V., 50.55% Phenol.....lb.	1.50	1.65
Terpeneless.....lb.	4.25	4.45
BERGAMOT, 25 lb coppers.lb.	1.20	1.75
Terpeneless.....lb.	6.25	8.00
Artificial, 25 lb cans.....lb.	1.00	1.40
Birch, Sweet, Northern, 25 lb tins.....lb.	3.00	3.10
Southern, 25 lb tins.....lb.	...	1.85
Birch Tar, rect., 5 lb bot....lb.	.50	.55
Crude, 50 lb tins.....lb.	.13	.14
Bois de Rose, tins.....		
Brazilian .....lb.	1.00	1.10
Cayenne, tins.....lb.	2.00	2.20
Cade, 25 lb cans.....lb.	.24	.30
Cajuput, native, 50 lb tins..lb.	.45	.57
Calamus, 5 lb bot.....lb.	2.75	3.00
Camphor Sassa, 1000 lb drs..lb.	.10	.12
White, 400 lb drs.....lb.	.13	.15
Cans, 50 lbs.....lb.	.15	.17
CANANGA, Native 25 lb tins .....lb.	1.80	2.00
Rectified, 25 lb tins.....lb.	2.25	2.45
Caraway, USP.....lb.	1.65	1.75
Cardamon, NF, 1 lb bot....lb.	14.00	15.00
Cascarilla, 1 lb bot.....lb.	56.00	70.00
Cassia.....		
Redist, USP, 50 lb cans...lb.	.95	1.00
Cedar Leaf, 50 lb tins.....lb.	.60	.65
Cedar Wood, light, 1000 lb drs .....lb.	.26	.30
Celery, 1 lb bot.....lb.	8.50	10.00
Chaulmoogra, USP 80 lb cases lb.	...	1.50
Cinnamom Ceylon, 1 lb bot..lb.	8.00	10.00
Leaf, 5 lb bot.....lb.	1.85	1.95
CITRONELLA Ceylon, 1000 lb drs.....lb.	.33	.34
50 lb tins.....lb.	.35	.36
Java, 400 lb drs.....lb.	.41	.43
50 lb tins.....lb.	.43	.45
Civet, Abyssin, horns.....oz.	2.10	3.00
Cloves, USP, 50 lb cans.....lb.	.80	.85
6 lb bot.....lb.	.85	.90
Copaiba.....lb.	.45	.50
Coriander, USP, 10 lb bots..lb.	4.10	4.35
Croton USP, 25 lb tins.....lb.	2.10	2.35
Cubebs, USP, 5 lb bot.....lb.	2.55	2.85
Cumin, 1 lb bot.....lb.	7.00	7.50
Dill, 25 lb cans.....lb.	3.00	5.25
Erigeron, 20 lb tins.....lb.	.95	1.05
EUCALYPTUS Austl, USP, 56 lb cans, cases.....lb.	.24	.26
500 lb drs.....lb.	.22	.23
Fennel, USP, 25 lb tins.....lb.	1.00	1.25
Geranium African, 25 lb tins..lb.	4.50	5.25
Bourbon, 25 lb tins.....lb.	4.50	5.00
Turkish, 28 lb tins.....lb.	1.65	1.85
Ginger, 1 lb bot.....lb.	3.00	3.25
Gingergrass, 28 lb tins.....lb.	2.50	2.70
Grape Fruit.....lb.	2.75	2.85
Hemlock, 25 lb tins.....lb.	.75	.90
Juniper Berries, USP, 25 lb tins .....lb.	1.20	2.00
Wood, 50 lb tins.....lb.	.50	.60
Labdanum, 5 lb bot.....lb.	5.50	6.00
LAVENDER, USP, 28 lb tins .....lb	1.40	2.10
Spike Spanish, 50 lb cans..lb.	.48	.65
Lemon Ital, 25 lb cans.....lb.	.80	1.05
California 35 lb cbys....lb.	...	.65
Lemongrass, native, 50 lb cans .....lb.	.42	.45
Limes, expressed, 25 lb tins..lb.	10.00	12.50
Distilled, 25 lb tins.....lb.	7.25	7.75
Linaloe Mex., 70 lb cases....lb.	...	1.40
Mace, distilled, 50 lb tins....lb	.95	1.00
Mandarin, 25 lb cases.....lb.	3.75	4.00
Musk Pods Cabardine, tins..lb.	...	...
Musk Tonquin, tins, Pods...oz.	18.00	20.00
Tonquin, tins, Grained..oz.	20.00	22.00
MUSTARD, USP, 1 lb bots.lb.	8.50	9.00
Artif, USP, 5 lb bot.....lb.	1.60	1.70
Neroli Bigarade, ¼ & ½ & 1 lb bot .....lb.	75.00	105.00
Petale, 1 lb bot.....lb.	95.00	105.00
Artificial, 1 lb bot.....lb.	5.00	15.00
Nutmeg, USP, 50 lb tins....lb	.90	.95
ORANGE BITTER, 25 lb tins .....lb	1.10	1.50
Sweet W Ind, 25 lb tins..lb	1.10	1.25
Italian, 25 lb cop.....lb	1.05	1.25
Orange American, Cold pressed 25 lb tins.....lb.	...	.70
Distilled, 25 lb tins.....lb.	...	.40
Spanish, 25 lb tins.....lb.	...	1.20
Oil Orris, concrete.....oz.	4.00	4.25
Origanum, 50 lb cans tech...lb.	.25	.27
Parsley, 1 lb bot.....lb.	6.50	6.75
Patchouli, 5 lb bot.....lb.	3.25	4.00
Pennyroyal, dom, 25 lb tins..lb.	1.65	1.75
Imported, 25 lb tins.....lb.	...	1.25
Pepper Black lb.....	...	6.00
Peppermint, nat. 60 lb cases lb.	2.40	2.60
Redis, USP, 60 lb cs.....lb.	2.65	3.00
Petit Grain S A., 25 lb tins..lb.	.95	1.00
French, 1 lb bot.....lb.	4.50	4.75
Italian, 25 lb tins.....lb.	2.70	2.30
Pimento Leaf, 25 lb tins....lb.	1.15	1.30
Berries, 25 lb tins .....lb	3.00	3.10
Pine Needle Siberian, cans..lb.	.80	1.00
Pinus, Sylvestris, 25 lb tins..lb.	1.30	2.00
Pumilio, USP, 25 lb tins...lb.	1.85	1.90
Rose Fr, 8, 16, & 32 oz pkgs..lb.	14.00	17.00
Bulg, 8, 10 & 32 oz pkgs...oz.	6.00	17.00
Rosemary, USP, 27½ lb tins..lb.	.34	.40
1000 lb drums.....lb.	.32	.38
Tech, 25½ lb tins.....lb.	.26	.28
Rue, 1 lb bot.....lb.	2.00	2.25
SANDALWOOD, E Ind ,USP, 100 lb case.....lb.	5.50	6.50
W Indian (Amyris), 25 lb. tins.....lb.	2.85	2.95
Australian, Tins.....	2.95	3.25
Sassafras, USP, 50 lb cans...lb.	.68	.90
Artificial, 1000 lb drs, 60 lb cans.....lb.	.18	.20
Safrol, cans.....lb.	.24	.26
Sage, Dalmatian, 25 lb. cans.lb.	2.00	2.10
Savin, 50 lb tins.....lb.	1.85	2.00
Snakeroot, Canada.....lb.	8.25	8.50
SPEARMINT, USP, 50 lb tins .....lb	1.30	1.50
Spruce, 50 lb tins.....lb	.70	.75
Tansy, American, 25 lb tins..lb.	1.75	1.95
Tar, 50 gal bbls.....lb.	.25	.30
USP, 50 gal bbls.....lb.	.75	1.50
Thyme, red, NF, 25 lb tins..lb.	.60	.75
White, NF, 25 lb tins.....lb.	.65	.80
Tech, 110 lb drums.....lb.	.50	.55
Turpentine, USP, rect cbys..lb.	.27	.30
Vetivert Bourbon, 10 bot....lb.	4.00	4.25
Indian, 1 lb bot.....lb.	25.00	38.00
Java, 1 lb bot.....lb.	12.00	13.00
Wine, heavy, 1 lb bot.....lb.	1.50	1.60
WINTERGREEN Gaultheria, true, 25 lb tin.....lb.	8.00	10.00
Southern, 25 lb tins....lb.	3.75	4.00
Synthetic see Methyl salicylate.....		
Wormseed, Balt, 25 lb tins...lb.	1.75	2.00
Wormwood, dom, 25 lb tins..lb.	2.50	3.00
Ylang Ylang Bourbon, 10 lb tins No. 1.....lb.	4.00	5.50
10 lb tins No. 2.....lb.	3.00	3.50
Manila, 1 lb bot.....lb.	22.00	30.20

Aconite Root, USP, bags....lb.	.12	.13
Agar Agar, No. 1, bales....lb.	.42	.45
Agar Agar No. 2, bales.....lb.	.37	.40
Aletris Root, bags.....lb.	.16	.18
Alkanet Root, bags.....lb	.10	.12
ALOES, Cape, 400 lb cases. lb.	.10	.11
Curacao, 140 lb cases.....lb.	.10	.11
Socotrine, Whole, 300 lb cs lb.	.30	.32
Althea Root, bags.....lb.	.14	.16
Cut cases.....lb.	.16	.18
Angelica Root, bags.....lb.	.12	.14
Angostura Bark, bags.....lb	.19	.20
Anise Star case.....lb	.10	.11
Spanish, bags.....lb	.10	.11
ARABIC GUM, White, No. 1, 220 lb bags.....lb.	.14	.15
Seconds, 220 lb bags.....lb.	.13	.14
Sorts, Amber, 220 lb bags..lb.	.06¾	.07¼
Powd, USP, 300 lb bbls....lb.	.10	.13
Areca Nuts, 100 lb bbls.....lb.	.05	.07
Powd, 100 lb bbls.....lb.	.10	.11
Arnica Flowers, bales.....lb.	.10	.11
Root, bags.....lb.	.40	.41
Arrowroot, St. Vincent, powd bbls.....lb.	.08	.09
Asafoetida, 250 lb cases.....lb.	.18	.20
Powd, 50 lb boxes.....lb.	.32	.35
Balm Gilead Buds, bags....lb.	.20	.21
Balmony Herbs, bales.....lb.	.10	.12
BALSAM COPAIBA Para, 80 lb cases.....lb.	.16	.17
South American, USP, 80 lb cases.....lb.	.18	.22
Peru, 120 lb cases.....lb.	.85	.90
Tolu, 90 lb cases.....lb.	.72	.82
Barberry Bark, of root, bags lb.	.15	.17
Bayberry Bark, bales.....lb.	.07	.08
Wax bbls.....lb.	.15	.17
Bees Wax, White, cases.....lb.	.30	.34
Yellow refined cases.....lb.	.21	.24
Yellow Crude Bags.....lb.	.15½	.20
BELLADONNA LEAVES, bale .....lb.	.11	.14
Root, bags.....lb.	.11	12
Benzoin Gum, Siam, boxes...lb.	1.05	1.30
Sumatra, cases.....lb.	.19	.22
Berberis Aquafolium Root, bags .....lb.	.08	.09
Beth Root, bags.....lb.	.08	.09
Black Indian Hemp Root, 100 lb bags.....lb.	.11	.12
Blood Root, bags.....lb.	.10	.11
Blueflag Root, bags.....lb.	.12	.13
Boldo Leaves, bales.....lb.	.12	.14
Boneset Herb, bales.....lb.	.08	.09
Borage Flowers, bales.....lb.	.19	.20
Broomtop Herb Cut, bales..lb.	.08	.09
Bryonia Root, bags.....lb.	.10	.11
BUCHU LEAVES Short, 250 lb. bales.....lb.	.19	.21
Long bales.....lb.	.75	.80
Buckbean Leaves, bales.....lb.	.09	.10
Buckthorn Bark, bags.....lb.	.06	.07
Berries, bags.....lb.	.29	.34
Burdock Root, bags.....lb.	.08	.10
Seed bags.....lb.	.30	...
Burgundy Pitch, 110 stand gross for net.....lb.	.08	.09
Imported.....lb.	.10	.11
Calabar Beans, bags.....lb.	.15	.16
Calamus Root, blchd cases..lb.	.23	.25
Unbleached, bags.....lb.	.07	.08
Calendula Petals, imp bales..lb.	.48	.50
Calisaya Bark, bales.....lb.	.17	.18
Powdered, bbls.....lb.	.22	.23
Canary Seed, South America, bags.....lb.	.03¾	.04
Morocco.....lb.	.03¾	.04¼
Turkish.....lb.	.03¾	.04¼
Candelilla Wax, bags.....lb.	.09½	.11
Cannella Alba Bark, bales....lb.	.25	.26
Cannabis, U.S.P.....lb	.16	.23
Cantharides, Chinese, cases..lb.	1.00	1.05
Powdered, boxes.....lb.	1.15	1.25
Russian, cases.....lb.	No stocks	
Powdered, boxes.....lb.	No stocks	
Caraway Seed, African, bags .....lb.	No stocks	
Dutch, 11 lb bags.....lb.	.08	.08½
Cardamon bleached, cases...lb.	.80	1.10
Decorticated, cases.....lb.	.52	.54
Carnauba Wax No. 1, 100 lb. bags.....lb.	.23	.24
Cascara Amarga, 150 lb bbls. lb.	1.25	1.30
So called bales.....lb.	.25	.30
CASCARA SAGRADA, 1931 bark .....lb.	.11	.12
1932 bark.....lb.	.10	.11
New crop.....lb.	.09	.10
Cascarilla Bark, quills, bales. lb.	.70	.75
Siftings, bbls.....lb.	.50	...
Cassia Batavia No. 1 bbls....lb.	.08	.08½
Shortstick, bales.....lb.	.07	.07½
Batavia No. 3, bales.....lb.	.06½	.07
China Select Rolls, cases..lb.	.02¾	.03½
Broken, bales.....lb.	.05¼	.05¾
Saigon, thin.....lb.	.19½	.20
Buds, cases.....lb.	.17	.18
Fistula, baskets.....lb.	.07½	.09
Catnip, Herb, bales.....lb.	.14	.15
Celery Seed, bales.....lb.	.40	.42
Ceresin Wax, White, bags...lb.	.10	.15
Yellow 200 lb. bags.....lb.	.09	.12
Imp. white 100 lb. bags.lb.	.21	.38
CHAMOMILE FLOWERS Roman, bales.....lb.	.32	.45
Hungarian, cases.....lb.	.15	.16
Charcoal Willow, powd, bbls.lb.	06	.06½
Wood, powd, bbls.....lb.	.04	.05
Chestnut Bark.....lb.	.07	.08
Leaves bales.....lb.	.05	.06
Chicle Gum, 200 lb. bales...lb.	.27	.30
Chiretta, bales.....lb.	.14	.15
Cinnamon, Ceylon, No. 1, bales .....lb.	.12	.14
No. 2 bales.....lb.	.09½	.10
No. 3 bales.....lb.	.11½	.12
Clover Tops, Red, bags ....lb.	.10	.12
Cloves Zanzibar, 135 lb bbl...lb.	.09	.09½
Cochineal, Black.....lb.	.51	...
Silver.....lb.	.45	...
Cohosh Root, Black, bags....lb.	.05	.06
Blue, bags.....lb.	.06	.07
Colchicum Root, bags.....lb.	.11	.13
Seed, bags.....lb.	.60	.65
COLOMBO ROOT, bags...lb.	.05	.06
Colocynth Pulp, bales.....lb.	.13	.14
Coltsfoot Leaves, bags.....lb.	.07	.08
Comfrey Root, bags.....lb.	.11	.12
Condurango Bark, bags.....lb.	.09	.10
Coriander Seed, Morocco, bags .....lb.	.06	.07
Bleached, bags.....lb.	.08	.09
Corn Silk, bales.....lb.	.05½	.06½
Cotton Root Bark, bales....lb.	.06	.07
Cowhage, 1 oz tins.....lb.	1.00	...
Cramp Bark so called bales..lb.	.06	.07
True, bags.....lb.	.25	.27
Cranesbill Root, bags.....lb.	.08	.09
CUBEB BERRIES, XX bags .....lb.	.30	.31
Powdered, boxes.....lb	.32	.33
Culvers Root, bags.....lb.	.12	.13
Cumin Seed, Malta, bags....lb.	.09	.09½
Morocco, bags.....lb.	.09½	.10
Cuttlefish, Bone Trieste, Straps .....lb.	.19	.22
French, boxes.....lb	.18	.21
Powdered, bbls.....lb.	.09	.10
Broken, bales.....lb.	.07	...
Damiana Leaves, bales....lb.	.16	.17
Dandelion Root, Imp. bags..lb.	.11	.12
Deer Tongue Leaves, bales...lb.	.07	.09
Digitalis Leaves, bales.....lb.	.25	.27
Dogwood Bark, Jamaica bags .....lb.	.07	.08
American bales.....lb.	.06½	...
Doggrass Root, USP, cut bags .....lb.	.11	.12
Dragons Blood Mass, cases..lb.	.80	.85
Reeds, boxes.....lb.	.85	.90
Echinacea Root, bags.....lb.	.15	.16
Elcampane Root, bags.....lb.	.06	.07
Elder Flowers, bags.....lb.	.14	.15
Elemi Gum, 85 lb cases.....lb.	.09½	.10
Elm Bark, bundles.....lb.	.14	.17
Grinding bags.....lb.	.08	.09
Powdered, bbls.....lb.	.13	.16
Ephedra Vulgaris, bales.....lb.	.05	.06
ERGOT, 150-200 lb bags....lb.	.35	.45
Eucalyptus Leaves, bales....lb.	.06	.07
Euphorbia Pilulifera, Herb, bags.....lb	.06	.08
Euphorbium Gum, cases....lb.	.14	.20
Fennel Seed, French, bags...lb.	.07	.08
German bags.....lb.	.09	.10
Foenugreek Seed, 200 lb bags .....lb.	.04½	.05
Fish Berries, 100-125 lb bag..lb.	.13	.15
Flax Seed, Whole 182 lb bbls.lb.	.05½	.06½
Ground, 180 lb bbls.....lb.	.06	.07½
Fringe Tree Bark or Root bags .....lb.	.10	.12
Fumigating Pastiles, boxes..lb.	.28	.30
Galangal Root, bags.....lb.	.08	.09
Galbanum Gum, cans.....lb.	.85	.90
Gamboge Gum, 100 lb cases..lb.	.50	.55
Powdered, cases.....lb.	.65	.70
Gelsemium Root, bags.....lb.	.07	.08
GENTIAN ROOT, bags....lb.	.17	.18
Ground bbls, boxes.....lb.	.19	.20
Powdered, bbls, boxes....lb.	.19	.20
Ginger, African, bags.....lb.	.05½	.06½
Jamaica Grinding bags...lb.	.12	.14
Cochin ABC & Lemon, bags .....lb.	.07½	.07½
Ginseng Root, cultivated cs..lb.	8.00	10.00
Wild Southern, cases.....lb.	11.00	13.00
Golden Seal Root, bags.....lb.	.65	.70
Powdered, boxes.....lb.	.90	1.00
Herb, barrels.....lb.	.35	.40
Grains of Paradise, bags....lb.	.08	.10
Grindelia Robusta, Herb, bale .....lb.	.07	.08
Guaiac Gum, 150 lb cases....lb.	.20	.22
Strained 75 lb cases...lb.	.70	.75
Guarana, tin cases.....lb.	.50	.55
Hellebore Root, Black, bbls. lb.	.05½	.06
White, 250 lb bbls.....lb.	.07	.08
Powdered.....lb.	.10	.11
Helonias Root, bags.....lb.	.25	.27
Hemp Seed, bags.....lb.	.02½	.03
Henbane Leaves, USP, bales.lb.	.08	.09
HENNA LEAVES, bales....lb.	.07	.08
Powdered.....lb.	.10	.15
Hops, bales.....lb.	.37	.42
Horehound, Herb, bales.....lb.	.06½	.07
Hydrangea Root, bales.....lb.	.06	.07
IPECAC ROOT, Cartagena, bags.....lb.	.75	.80
Powdered, 220 lb bbls...lb.	.85	.90
Nicaraugua. 125 lb. bags lb.	.60	.65
Isinglass, American, 130 lb cases .....lb.	.95	1.00
Russian (Beluga), boxes...lb.	4.50	...
Jaborandi Leaves, bales....lb.	.10	.11
Jalap Root, Whole, 150 lb bag.....lb.	.15	.16
USP, Powd, 250 lb bbls....lb.	.19	.20
Japan Wax 224 lb. cases.....lb.	.06½	.08
JUNIPER BERRIES, 125 lb bags.....lb.	.05	.05½
Kamala, boxes.....lb.	.21	.22
Karaya Gum, Powdered, bbls.lb.	.11	.20
Kava Kava Root, bags.....lb.	.13	.14
Kino Gum, Black, cases.....lb.	.50	.55
Kola Nuts, 150 lb bags.....lb.	.05½	.06
Lady Slipper Root, bags....lb.	.28	.30
Larkspur Seed, bags.....lb.	.25	.27
Laurel Berries, bags.....lb.	.08	.09
Leaves, Greek, bags.....lb.	.05	.06
Italian, bales.....lb.	No stocks	
Lavender Flowers, Ordinary.lb.	.16	.20
Selected.....lb.	.30	.32
Lemon Peel, bags.....lb.	.08½	.09
LICORICE ROOT, Whole bbls .....lb.	.12	.15
Spanish Natural bales....lb.	.05½	.07
Powdered, bbls.....lb.	.09	.11
Selected Cases.....lb.	.12	.15
Cutting, 125 lb bags.....ln.	.06	.06½
Turkish, 150 lb bales.....lb.	.05	.06
Linden Flowers with leaves, bales.....lb.	.14	.15
Without leaves, bales...lb.	.15	.16
Liverwort Leaves, bales.....lb.	.13	.14
Lobelia, Herb, bales.....lb.	.18	.20
Seed, bags.....lb.	.21	.26
Lovage Root, Imp., bags....lb.	.15	.17
Lupulin N. F., tins.....lb.	1.20	1.65
Lycopodium, 88 lb. cases....lb.	.22	.24
MACE SIAUW, No. 1, cases .....lb.	.28	.29
Banda No. 1, cases.....lb.	.35	.36
Batavia No. 2, cases.....lb.	.31	.32
Malva Flowers, Blue, bales..lb.	.60	.65
Black, bales.....lb.	.18	.33
Leaves, bales.....lb.	.12	.13
Manaca Root, bales.....lb.	.18	.19
Manna, Large Flake, cases...lb.	.40	.45
Small Flake, cakes.....lb.	.25	.30
Sorts, cases.....lb.	.45	.50
Mandrake Root, bags.....lb.	.08	.09
Marjoram, Herb.....lb.	.21	.22
French, No. 1 bales.....lb.	.16	.17
German, bales.....lb.	.27	.29
Mastic Gum, 120 lb. cases..lb.	.19	.21
Matico Leaves, bales.....lb.	.15	.16
Mezereon Bark, bags.....lb.	.02¼	.03
Millet Seed, Yellow, bags...lb.	.04½	.05½
Montan Wax, Crude, bags..lb.	.26	.28
Bleached, pure. bags....lb.	.10	.11
Moss, Iceland, bales.....lb.	.11	.12
Irish, Bleached, bales....lb.	.95	1.00
Mullein Flowers, tins.....lb.	.07	.07½
Leaves, bales.....lb.	.06	.07
Musk Root, Russian, bags...lb.	.20	.22
Myrrh Gum, 200 lb, cases...lb.	.22	...
Nutgalls, Chinese, bags.....lb.	...	.20
Aleppy, bags.....lb.	.13	.15
Powdered, bags.....lb.	.11	.12
Nutmegs, 110's cases.....lb.	.12½	.13
75's & 80's cases.....lb.	.18	.19
Grinding, bags.....lb	.05	.06
NUX-VOMICA Buttons, bag .....lb.	.09	.10
Powdered, 200 lb bbls..lb.	.05½	.06
Oak Bark, bags.....lb.	.06	.07
Olibanum Gum, 280 lb cases Siftings.....lb.	.19	.21
Tears, No. 1 Extra.....lb.	.14	.15
No. 2.....lb.	.09	.10
No. 3.....lb.	10.00	11.00
Opium Gum, USP, cases....lb.	11.00	12.00
Granular, cans.....lb.	11.00	12.00
Powdered, USP, cans.....lb.	.25	.30
Orange Flowers, cases.....lb.	.07½	.08
Peel, Bitter, bags.....lb.	.07	.08
Sweet bags,.....lb.	.08	.09
ORRIS ROOT, Flor. bid. bags .....lb.	.12	.13
Powdered, 200 lb bbls..lb.	.06	.07
Verona, bags.....lb.	.10	.11
Powdered, 200 lb bbls..lb.	.80	.85
Fingers, boxes.....lb.	...	...
Ozokerite Wax, Brown, Hard lb.	.26	.28
Bags.....lb.	.26	.28
Green, Hard, bags.....lb.	.21	.25
Yellow, Refined, bags....lb.	1.40	1.45
Papain, Crude, 150 lb cases..lb.	1.50	1.55
Pure, Powdered, 10 lb bot..lb.	.20	.23
Paprika, bags.....lb.	.16	.18
Pareira Brava Root, bags....lb.	.04½	.05½
Passion Flower, bales.....lb	.15	.16
Patchouli Leaves, bales.....lb.	.08	.09
Pennyroyal, Herb, 100 lb bags .....lb.	.11	.12
Leaves, 100 lb bags.....lb.		

Drugs and Spices

PEPPERMINT LEAVES, Imp bales lb.	.30	.50
Domestic, bales lb.	.18	.20
Pichi Leaves, bags lb	.08	.09
Pimento Select, bags lb.	.04½	.05
Pink Root, True, bags lb.	.25	.27
Pleurisy Root, bags lb.	.13	.14
Poke Berries, bags lb.	.15	.16
Root, 200 lb bales lb.	.05½	.06
Pomegrant Bark of Root, bags lb.	.25	.28
Bark of Fruit, bags lb.	.15	.20
Bark of Tree, bags lb.	.15	.17
POPPY FLOWERS, Red, bags lb.	.40	.45
Prickly Ash Bark lb.	.12	.15
Southern bags lb.	.11	.11½
Northern, bags lb.	.12	.13
Berries, bags lb.	.20	.21
Prince's Pine, bales lb.	.15	.20
Psyllium Seed, Black, bags lb.	.10	.12
Plantago Seed, Blonde, Bags lb.	.05	.07
Pulsatilla, Herb, bags lb.	.10	.11
Pumpkin Seed, bags lb.	.11	.12
Pyrethrum Flowers lb.	.16	.17
Pwd., pure, 200 lb.bbls. lb.	.20	.21
Quassia Chips, bags lb.	.05	.06
Quebracho, bulk, 125 lb. bbl. lb.	.20	.21
Quince Seed, Spanish bags lb.	.75	.80
Persian, bags lb	.70	.75
Rape Seed, South American, bags lb.	No stocks	
Dutch, bags lb.	.05	.05½
Raspberries, Dried, bbls lb.	.25	.30
Red Saunders, bags lb.	.08	.09
Rhatany Root, bags lb.	.11	.12
Rhubarb Root, HD, cases lb.	.19	.20
Powdered, bbls lb	.23	.24
Rosemary Leaves, bales lb.	.05½	.06
Flowers, cases, bales lb.	.28	.32
Rose Petals, pale lb.	.13	.14
Red lb.	.45	.50
Rue, Herb, bales lb.	.18	.20
Sabadilla Seed, bags lb.	.14	.15
Powdered, bbls lb.	.18	.19
SAFFRON FLOWERS, American, bales lb.	.16	.18
Valencia, 1 lb cans lb.	10.50	11.50
Sage Dalmatian, bales lb.	.05	.05½
Sandarac Gum, 300 lb bbls. lb.	.23	.24
Sarsaparilla Root, Honduras, bales lb.	.55	.60
Mexican, bales lb.	.14	.15
Sassafras Bark, Ordinary, bales	.08	.10
Select, bales lb.	.12	.15
Savory Leaves, bale lb.	.05½	.06½
Saw Palmetto Berries, bags lb.	.07	.08
Scammony Resin, boxes lb.	1.30	1.35
Root, bags lb.	.06	.07
Senega Root, bags lb.	.37	.40
SENNA ALEX., 150 lb cases lb.	.20	.25
Half leaf 150 lb bales lb.	.08	.10
Sifting, 400 lb bales lb.	.08	.09
Tinnevelly, Bold, 350 lb bales lb.	.09	.11
Medium Leaf lb.	.07½	.08½
Small Leaf, lb.	.06	.08
Pods, 350 lb lb.	.08	.09
Powdered, 200 lb lb.	.08	.09
Serpentaria Root, bags lb.	.32	.33
Simaruba Bark, bales lb.	.24	.26
Skullcap Leaves, Eastern, bales lb.	.25	.30
Western, bales lb.	.14	.24
Skunk Cabbage, Natural, bales lb.	.13	.15
Snake Root, Canada Natural, bags lb.	.16	.18
Canada, Stripped, bags lb.	.40	.45
Soap Bark lb.	.08	.09
Cut, 125-175 lb bags lb.	.06	.07
Crushed, 200 lb bbls lb.	.15	...
Powdered, bbls lb.	.09	.10
Spearmint Leaves, American, bales lb.	.16	.17
Spermaceti, blocks, cakes, cases lb.	.18	.20
Bulk lb.	.17	.19
Spikenard Root, bags lb.	.07	.08
Squaw Vine, bales lb.	.11	.12
Squills, White, tested lb.	.05	.07
Powdered, bulk lb.	.13	.15
Stavesacre Seed, bags lb.	.13	.14
Stillingia Root, bags lb.	.06	.07
Stone Root, bags lb.	.07	.08
St. Ignatius Beans, bags lb.	...	.90
St. John's Bread, bags lb.	...	.06
STRAMONIUM LEAVES, bales lb.	.10	.11
Seed, bags lb.	.07½	...
Strophanthus Seed, Kombe, bags lb.	1.50	1.70
Styrax Liquid, Artificial lb.	.26	.35
Genuine, USP lb.	.38	.43
Sunflower Seed, bags Calif. lb.	.05	.06
South American, bags lb.	No stocks	
Tamarinds, bbls lb.	.05½	.06½
Kegs keg	3.75	3.85
Tansy, Herb, bales lb.	.12	.13
Thus Gum, 450 lb bbls lb.	.05½	.06½
THYME, Spanish, bales lb.	.06	.07
French, bales lb.	.07½	.08
Tonga Root lb.	.22	.25
Bark, bundles lb.	.22	.25
Tonka Beans, Angostura Cases	1.45	1.70
Para cases lb.	.60	.70
Surinam cases lb.	.65	.75
Tragacanth Gum, No 1, 100 lb. cases lb.	.65	.70
No. 2 lb.	.52	.57
No. 3 lb.	.42	.47
Powdered, 50 lb boxes lb.	.55	.65
Turkish cases lb.	.40	.60
Turmeric Root Madras, bags lb.	.06	.06½
Aleppy bags lb.	.05½	.06
Powdered lb.	.10	.12
China bags lb.	.11	.12
Turpentine Venice True, 80 lb cases lb.	.30	.38
Artificial, 80 lb cases lb.	.15	.16
Uva Ursi Leaves, bales lb.	.05	.06
Valerian Root, Belgium bags lb	.14	.16
VANILLA BEANS, Mexican, whole, cases lb.	3.00	4.00
Cuts, cases lb.	2.40	2.60
Bourbon, cases lb.	.70	1.25
Vetivert Root, 100 lb bags lb.	.20	.25
Violet Flowers, bags lb.	.85	.90
Wahoo Bark of Root, bags lb.	.28	.30
Bark of Tree, bags lb.	.13	.14
White Pine Bark, Roseed, bags lb.	.05½	.06
White Poplar Bark, bags lb.	.06	.07½
Wild Cherry Bark, Natural thin, Green lb.	.06	.07
Rossed bales lb.	.09	.10
Thick Rossed, bales lb.	.04	.05
Wild Indigo Root, bags lb.	.09	.10
Willow Bark, bags lb.	.05	.06
White, bags lb.	.15	...
Witch Hazel Bark, bags lb.	.05	.06
Leaves, bales lb.	.06	.07
Wormseed, American, bags lb.	.06	.07
Wormwood, Herb, Imp., bales lb.	.08	.09
Yellow Dock Root, bags lb.	.08	.09
Yerba Mate, bags lb.	.13	.15
Santa, bags lb.	.07	.08

Industry's Books

The Consumer, by Walter B. Pitkin, 421 pages, McGraw-Hill Book Co., New York, $4.00 net.

In our new, planned economic order, it is going to be increasingly important accurately to determine consumption. Thus Mr. Pitkin's book makes a singularly appropriate appearance at this time, for in it he makes what is said to be a pioneer attempt to explore the "no man's Land of consumption." It considers three paramount questions: What do people buy? Why do they buy it? and What would they buy if they could? Mr. Pitkin brings to this work his usual facile style which adds to the interest of the book, and sufficient real figures to make it well worth reading.

The Physiological Effects of Radiant Energy, by Henry Laurens, 610 pages, Chemical Catalog Co., Inc., New York, $6.00 net.

Source material reviewing in detail the more outstanding evidences of the physiological action of radiant energy. Deals with its effects on the skin, on wounds and skin diseases, on the eye, on the circulatory system, on the blood, on metabolism, on body temperature, respiration and blood reaction, on tuberculosis and some other diseases, and on bacteria, and other microorganisms, toxins, antitoxins, proteins, ferments, etc. This is an American Chemical Society Monograph.

Purchasing Policies and Practices of Chain Drug Companies, by Ernest F. Witte, 89 pages, University of Chicago Press, $1.00 net.

A comprehensive examination of all the details relating to the buying policies and practices of drug chains during the period from 1927 to 1930. An attempt is made to examine in detail the various phases of drug chain buying.

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Drug SALESMAN, 28, married, ten years experience in New York territory; knows the druggist well and has sold to them; desires connection with reputable firm as New York representative; highest credentials. Box 888, THE DRUG AND COSMETIC INDUSTRY.

Chemistry of the Skin

(*Continued from page 442*)

becoming too acidic? That is one of the questions concerning the chemistry of the skin which has not been thoroughly investigated. How do these facts interest the manufacturer of cosmetics? Whatever claims are made about his products, whatever ingredients he uses for whatever purpose, there is one thing that he should keep in mind. The degree of acidity or alkalinity of a cosmetic is a factor to be considered. Should a preparation be as nearly neutral as possible in order not to disturb the slight acidity of perspiration? Should it be slightly acidic to augment the acidity of the skin? Should it be slightly alkaline because of the soothing effect of such cosmetics?

The writer does not wish to put forward his own pet theory here. He prefers to provoke discussion on this subject. We cannot be too definite in our opinion because we are dealing with the nature of normal skin and with what is best for it. But nature is not always definite and it is not always possible to know what is normal in nature. There is no doubt that the subject is worthy of serious investigation. Certainly it is not justifiable to make a cosmetic slightly alkaline merely because such a procedure yields a satisfactory emulsion or to make it neutral because the ingredients when mixed result in a neutral product or to have it acidic because the perfume oil used contains some constituent which "keeps better" in an acid medium.

Face Powder

(*Continued from page 420*)

a vehicle for color and perfume. When perfume and color basis are made with precipitated chalk blending of the powder is very materially aided. Chalk gives the powder a very desirable fluffiness and reduces the inherent sheen of the talc. It is used moreover to supplant starch and it gives to the skin a soft, peachy texture as opposed to a hard unnatural finish.

Hence by mixing together talc, zinc or titanium oxide, zinc or magnesium stearate, and precipitated chalk, we have a face powder that possesses all the necessary qualities. One will find face powders that have eight or nine materials, many of them duplicating functions, as for instance when one finds magnesium and zinc stearate in the same formula.

The essential fault in face powder is that the several materials and the several properties are not inseparably united. Each material with its own exclusive property and function remains individual, and the result of this is shown, when through the use of certain opacifying agents, a mask-like deposit is left on the face. In other words the powder gradually blows off the face and the material having the greatest adhesiveness clings to the last. This in some cases may be undesirable as the material may be susceptible to the action of perspiration and cause blotchiness or clogged pores.

Face powder is still a mixture without true homogeneity. It may be that in the future we shall abandon mixing face powder in favor of precipitation, which will give us homogeneous particles having all of the desired properties, inseparably united.

In order to show how face powder is made and the manner in which the proper degree of opacity is secured the following formula table is given (quantities are stated in percentages):—

Light*

Covering Power		*Slip*		*Adhesiveness*	
TiO_2	5	Talc	81	Zinc Stearate	6
ZnO	20	Talc	64	Magnesium Stearate	8
Kaolin	22	Talc	62	Zinc Stearate	8

*Absorbency supplied by 8% $CaCO_3$ in each formula.

Medium*

TiO_2	7	Talc	79	Zinc Stearate	5
ZnO	28	Talc	56	Magnesium Stearate	7
Kaolin	30	Talc	54	Zinc Stearate	7

*Absorbency supplied by 9% $CaCO_3$ in each formula.

Heavy*

TiO_2	8	Talc	78	Zinc Stearate	4
ZnO	32	Talc	52	Magnesium Stearate	6
Kaolin	34	Talc	50	Zinc Stearate	6

*Absorbency supplied by 10% $CaCO_3$ in each formula.

Within each group the three formulas will be found to have approximately the same covering power, but owing to the greater opacity of certain of the covering agents (titanium dioxide especially) and hence the dimunitions in necessary quantity some of the powders will have more slip than others. Some experimenters have maintained that when TiO_2 is used as the covering agent the percentage of chalk should be increased very materially because the excessive percentage of talc gives the powder an undesirable sheen, it being held that since talc possesses a relatively high sheen and since sheen or shine is the condition that the powder must overcome the less of talc used the better.

An article of this kind would be incomplete without a word regarding the quality of raw materials themselves. It may be taken as axiomatic that you can't make good face powder with poor materials. To produce best results use only the finest grade of each of the several ingredients. The prime qualities are whiteness and fineness. All should be 200 mesh or better and pure white. Examination of samples from different sources reveals an amazing difference in color particularly. This is especially true of talc, which is highly variable in color, texture and slip according to location from which obtained. Even U. S. P. zinc oxide will show marked differences in color, some of it being decidedly gray. This is not less true of calcium carbonate.

The whiteness of the materials employed is of major importance in securing uniformity in the color of the finished face powder. The tints of face powder are so delicate that it requires but little variation in raw materials to throw them off. This condition can of course be overcome but it sometimes requires a lot of troublesome juggling during the mixing process.

We haven't space to discuss colors adequately but we should like to finish with the observation that few houses exactly control colors of face powder. They get the shades of successive batches fairly close and let them go at that.

A master sample should be kept and all batches made to conform exactly. Failure to do this introduces another variable and is one of the contributory reasons why customers are lost. Once we examined eight samples of rachel powder from one of the famous houses and all eight were different. This is remarkable since rachel is an easy shade to match.

Finally there is the question of odor. Odor is of major importance. It brings the first sale always. Hence, the utmost care should be taken, not only in getting a really distinctive odor, but also in preserving that odor unchanged. This becomes largely a question of packaging. Paper absorbs the perfume. The sizing of the paper and the adhesive with which the boxes are put together very often attack the perfume to such an extent that objectionable off-notes are introduced. Virtually every perfumer in the trade is agreed upon this one point, especially those who are connected with essential oil houses and have to suffer complaints from customers who insist that odors soon lose their delicate quality. The subtle delicacy of the perfume, should be preserved at all costs, not only during the time the box is in transit, but also after it is opened. Most powders soon lose most if not all of their odor soon after they are opened. This question is governed partly by the materials out of which powder packages are made and also by the mechanics of the box. Powder boxes should be impervious chemically and physically to perfume reactions and should be adapted to resealing with a reasonable degree of tightness.

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